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## *THE SUPPLY OF THE ARMIES OF FREDERICK THE GREAT AND NAPOLEON.*[1]

TRANSLATED FROM THE FRENCH BY HENRY G. SHARPE, CAPTAIN AND C.S., U.S.A.

(Continued from page 218.)

### SECTION IV.

### ULM AND AUSTERLITZ. (1805.)

NAPOLEON, during the campaign of 1805, made use of the resources of the countries traversed in the same manner as he did in the Italian campaign of 1796–97. He wished above all to move rapidly, and the impedimenta seemed to him to hinder his march. Marshal Berthier said, "In the war of invasion, which the emperor makes, there are no magazines."

It is true that the circumstances which were connected with the surrender of Ulm did not permit Napoleon to wait for the formation of magazines or the collection of supplies, etc.; but it must be recognized, nevertheless, that this lack of resources occasioned desertions, and that marauding appeared in the army, and that discipline felt the effects of it. General Comte de Ségur tells us that Marshal Mack did not have time to collect in Ulm large supplies of provisions, as on the 17th of October, 1805,—that is to say, twenty days after the passage of the Rhine by our troops,—he was obliged to admit, in an interview with

[1] By Ch. Aubry, Officier d'Administration, Chef des Bureaux de la Direction du Service administratif des Corps de Troupe du Gouvernement militaire de Paris.

one of our officers bearing a flag of truce, that soon he would be compelled to eat the three thousand horses he had in the place. He added that he had ten days' provisions, but he wished, evidently, to deceive his adversary, and the lack of supplies was one of the serious causes of the capitulation. As at Mayence and at Genoa, the supplies which had been collected for the siege were not sufficient, and this deficiency compelled the marshal to treat for peace with the French army. In our time, was not Bazaine also compelled to capitulate under like conditions?

These four examples, of the surrender of fortified places of the first order on account of the lack of provisions and forage, are lessons for us, as our system of supply not only provides for the collection in time of peace of a portion of the stores necessary during the duration of the siege, but also furnishes means of procuring the additional stores in a very short time.

After the fall of Ulm, Napoleon marched on Munich, and then on Lintz. It was in this last town that he attempted to organize his means of supply, or at least to put a check upon the marauding which reigned in the army. Comte de Ségur tells us in his "Mémoires" that the rapidity of the marches and countermarches in the Ulm campaign and the breaking up of roads by rains, by delaying the wagons and caissons, had rendered the regular distribution impossible. "It was a fact," says he, "that if our soldiers had not taken from the peasants their provisions and cattle in order to nourish themselves, that if they had been compelled to await their supplies from our wagons, which followed at a very long distance in the rear of the columns, the main point of the enterprise would have failed." Necessity then excused such a course, but this evil, commenced in Franconia and Suabia, continued in Bavaria; it was renewed upon the Inn, and destroyed discipline.

There was a great deal of pillaging in the rear of the army. Napoleon thought that this was inevitable with marches as rapid as those which he imposed upon the troops. Nevertheless, he should have put an end to the incessant pillaging, which aroused the population against us, and which was often pushed to an extreme. The 7th of November he published an order. The pillagers were surrounded, and about ten thousand of them were gathered together in Braunau; then, the order having been given, they were subjected to an examination in their companies, were deprived of their booty, and flogged by their comrades.

Napoleon did not deceive himself concerning the inconveniences of marching without magazines; he said, "We have had an extremely favorable season for this, and, although we have been constantly victorious, and have found vegetables in the fields, we have, however, suffered very much. In a season when there were no potatoes in the

fields, or if the army experienced some reverses, the lack of magazines would cause us the greatest misfortunes."

He recognized then that it was impossible to march constantly forward without providing for supplies from the rear, and it was on account of certain political considerations, which prevented him from applying these principles, that later, in Russia, his troops suffered much, and that, after partial defeats and indecisive combats, they disbanded to hunt for provisions.

General Bronsart von Schellendorf has said that it is possible to deprive men a short time of food, but he does not approve of marches of several hundred leagues made without a regular system of supplies. In the work of this illustrious writer, entitled "The Duties of the General Staff," is the following:

"War essentially ignoring, as it does by its acts of violence, the importance of the preservation of human life, and calling for, even off the battle-field, the highest sacrifices and the greatest efforts from all till the weaker succumb, naturally demands, every now and then, that certain hardships as regards the necessaries of life must be endured.

"Just, however, as every general in command must try his very best to attain the desired results on the field of battle with the smallest possible loss to his own side, and just as the commander-in-chief and his general staff must do the utmost in their power to direct the movements, etc., of the forces they are manœuvring, so that the strategical object in view may be arrived at with the least amount of fatigue, hardship, and effort on the part of the troops under their orders, so must those that are in military and administrative charge of an army equally consider it their duty to see that the soldier is provided with food, as regularly issued and as good in quality as is possible under the circumstances. But this must, nevertheless, never be considered as a question of the first or highest importance. To spare troops in battle, to exact the least amount of hardship and fatigue on the march and in the bivouac, and to insure regular supplies are, strictly speaking, after all, matters of secondary importance, and must only enter into the general question as such.

"These ideas may to many appear somewhat barbarous and inhuman. But, on the one hand, war is in itself a cruel and inhuman proceeding, and on the other, by not submitting at the right time and place to certain losses, sacrifices, and hardships, we run the risk of losing the game altogether, and of entailing, in the long run, the most serious losses and the greatest misery and suffering."

Afterwards the disorder was less, and some time before Austerlitz the emperor, having crossed the Brunn and finally selected his battle-field, sent provisions, ammunition, and the ambulances to the vicinity of that ground. The supplying was then relatively an easy matter at

the end of November and the first of December, the evening before the battle, which rendered it possible to keep the men in the ranks, as marauding was not necessary.

## SECTION V.

### PRUSSIAN CAMPAIGN. (1806.)

The French army during the operations of 1806 lived only upon the conquered country, as was done the preceding year.

Without magazines, the emperor supplied his army by means of requisitions imposed upon the countries crossed by it. But when it was assembled in Poland the difficulties became very serious, and marauding again commenced, as in 1805, to weaken the effective strength. It is thought that the number of marauders amounted to thirty thousand. This figure, although very great, is small in comparison with that of the stragglers and marauders of the army during the Russian campaign. It may then be asserted that the service of subsistence should be strongly organized, and that alone Frederick the Great was right when he collected considerable supplies, for, if these precautions had the disadvantage of depriving his army of a number of combatants, he had, on the other hand, the advantage of preventing the dispersion of his regiments to subsist and to pillage.

The traditions of Frederick II. were then discarded, even by his successors, for the rage of the Court of Berlin was such, in 1806, that one dreamt only of attacking; the necessary precautions to be taken in order to assure the defense of Prussia were overlooked.

The advisers of the king, the queen, and Prince Louis urged for war. They neglected even the armament and supplying of their fortresses.

The victories of Jena and Auerstädt, won the same day by Napoleon and Marshal Davout, resulted in the disorganization and almost complete destruction of the Prusso-Saxon armies.

These brilliant feats of arms enabled Napoleon to improve the supplies for his troops, to make contributions and requisitions upon the conquered countries. At Leipzig he confiscated sixty millions of English goods, and it was then that he declared the "Continental Blockade." While Napoleon was exhausting their country the Prussians scattered in order to find subsistence. They were observed to die of hunger rather than dare to touch the ricks of grain near which they halted. Certain historians add that the illustrious Goethe, then commissary in Weimar, prevented his fellow countrymen from dividing among themselves certain supplies which fell, after the battle of Jena, into the possession of our troops.

There was too much system among the Prussians, and our people did not have enough of it; but the latter were conquerors, and therefore they lacked nothing.

General de Ségur says in his "Mémoires,"—

"We, on the contrary, in this hostile country lacked nothing. Too much accustomed to live only by marauding, sacrificing everything to our end, and having as a first rule success only, we seized, we devoured in passing, everything that we laid our hands upon, provisions and forage. By this means it was possible to soon gain several hours and even several days. By such means Murat and his cavalry moved to the head of the enemy's column and checked the flight of the Prussian army; they seized one-half and threw the other portion upon our corps which was pursuing. In the fight, the audacity of this movement and also the astonishment and exhaustion of the troops gained the day. With the exception of Blücher's troops, they were emaciated skeletons when they surrendered."

The campaign of 1806 was then made without magazines because it was necessary to move very rapidly in order to surprise the Prussians, and, moreover, because it was not possible to organize depots of provisions for one hundred and fifty thousand men and thirty thousand horses in a few days.

One year before these great operations the emperor wrote to General Petiet, "We marched without magazines; we suffered in consequence of that fact." This time it was the same, and he crossed the frontiers of Saxony when the details of his magazines were scarcely sketched out. The efforts of the commissariat were then useless in this case, and, in spite of Daru, in spite of the devotion of his subordinates, it was necessary to fall back upon the resources of the countries occupied. Moreover, Napoleon, wishing to obtain decisive results and to terrify the Court at Berlin, was obliged to disregard the wants of his army. He thought that one victory would immediately put an end to the privations that he was obliged to impose upon his troops.

In his theory of war Clausewitz approves of this manner of acting: "There are in war privations, physical efforts, and danger. What can be exacted of his army by the general-in-chief as regards these three points has no limits."

Many military writers, especially General Bronsart von Schellendorf, share also this opinion.

In opposition to the principles of Frederick the Great, they think that military operations should not be subordinated to the supply of the army, and that in 1806 the emperor acted wisely in neglecting this feature in order to give greater freedom of movement to his army and to move more rapidly; by acting otherwise he would, say they, have compromised the victory.

We will see in the following section how the *Grande Armée* was supplied during the winter of 1806–7, and the operations in Poland, which ended in the great victory of Friedland.

## SECTION VI.

### CAMPAIGN IN POLAND. (1807.)

During the winter of 1807 Napoleon cantoned his army, which had just conquered Prussia, behind the Passarge. This army exceeded one hundred and twenty thousand, and, notwithstanding the resources which it found in this part of Poland, a great amount of skill was necessary to supply so large a number at such a distance from France.

The camp of Finkenstein, near the towns of Gutstadt and Osterode, was supplied by means of purchases or requisitions drawn from the country.[2] The army could rest there after the numerous battles that it had fought with the Prussians and Russians, and become built up. All military historians declare unanimously that the condition of the army there was flourishing, and that the distributions of provisions were made very regularly. The commissariat, reorganized by the emperor, was well established there, and its officers in number sufficient to insure a supply of the troops assembled.

During the campaign of 1806 they lived by requisition, and Napoleon marched his armies upon a front of from forty to fifty kilometers, which he reduced to thirty kilometers only upon approaching the enemy. With this front of thirty kilometers the emperor was enabled to have his troops subsisted by the inhabitants at the rate of one hundred and thirty-six men to the square kilometer, and of two soldiers to each inhabitant.

Orders describing which countries were to be drawn upon for supplies were sent to the marshals by the chief of staff, who assigned the limits of the country which was to supply each of their army corps. Intendant-General Baratier, in his work entitled "Ravitaillement des Armées," estimates that it is possible to live by this means at the rate of six soldiers for each inhabitant.

"It is considered that in a fairly well supplied country it is possible to subsist for one day a number of soldiers, six times the number of the population, and a number of horses equal to one-fourth the effective strength of the men."

Whenever making requisition and living upon the inhabitants, the emperor ordered his marshals to punish marauders and all soldiers who

[2] All laws concerning requisitions were enforced in the countries conquered; but Prussia and Saxony were compelled to make reimbursement of the moneys paid out. The means of coercion published in the laws of the 17th of January, 1795, and of the 16th of March, 1793, were both used upon the inhabitants of the country occupied by our troops.

The decree of the 10th of April, 1806, compelled the mayors of the halting-places upon the line of communication to supply, by means of requisitions, horses and wagons necessary for the convoys, when the troops had need of them and could not procure them otherwise. These arrangements were carried out in Germany and Poland, and thus it was easy to supply the camp at Finkenstein.

enforced requisitions illegally. I may cite here the following order of Marshal Soult, given in conformity to the directions of Napoleon:

"The generals should take the most severe measures to maintain order and discipline in their troops; they will specially endeavor to prevent any devastation or unnecessary vexation, committed under any pretext whatever."

When the troops were maintained by the inhabitants, either in Prussia or Poland, they would receive one ration of bread of twenty-eight ounces, or seven hundred and thirteen grammes; a pound of meat (four hundred and sixty-seven grammes), a pot of beer, a one-sixteenth part of a litre of brandy, and vegetables. (General order of the Fourth Corps, commanded by Marshal Soult.) To point out when requisitions should be enforced, and to collect the supplies required and have them sent to the places occupied by the troops, orders were given to the cavalry to assist the commissariat; those of Marshal Soult and of Marshal Berthier were exact in this particular.[3] All requisitions were paid by means of contributions imposed upon the German countries, consequently there was not very much disorder.

At the commencement of 1807 the emperor, acting upon the advice of Daru, in order to avoid the inconveniences resulting from the organization of the auxiliary convoys, created military equipages and placed them under the orders of the commissary of the army corps, near which they were to be employed as much for the transport of provisions as for that of the sick. (Decree of 26th of March, 1807.) One can only praise the services rendered by this new corps, and later, during the Russian campaign, the soldiers of the train performed their duties in difficult countries and under the most trying circumstances.

Let us see now how the cavalry was supplied. This arm should, in principle, live upon the country and always have a reserve of two days' oats; moreover, the horses were loaded with twenty-five kilos of hay. In the correspondence of General Belliard, chief of staff of the cavalry corps, is found the following order, addressed to the generals of division of the cavalry: "Order all your colonels to have six days' hay tied up in case of a sudden departure."

"It was," says General Lewal ("Tactique des Ravitaillements"), "an added burden of at least thirty kilos for which we see no reason. The increased fatigue broke up our cavalry; later in Russia we lost half of it in a month, that is at the passage of the Niemen on arriving at Witepsk, and that was also due to the same causes or to the lack of nourishment.

Informed by the cavalry and aided by it and by the municipalities who yielded to the fear of the emperor and his army, until then invin-

[3] Every troop in moving has its advance-guard and scouts, not alone for examining the country, but also to take measures to provide for its subsistence. (Intendant-General Friant.)

cible, the commissary could collect with its means of transport, and especially with a train of equipages, an immense amount of supplies, and provide the camp at Finkenstein.

One reads in the "Cours d'Administration Militaire de M. le Sous-Intendant Militaire Odier" the following passage, which shows us what was, during this difficult campaign, the foresight of the commissariat, what benefits Napoleon could draw from it after Eylau:

"After an action vigorously disputed, in which the French army, in the midst of winter and beyond the Vistula, had the only positive advantage of sleeping upon the field of battle, the only talk was to repass the Rhine. Already the quickness of thought seemed to communicate itself to the bodily vigor, and the supposed runaways from Eylau covered Poland and Prussia; arriving at the Elbe, they marched towards the Rhine. To hear some people talk, one would think that everything was lost.

"Nevertheless, the army which had saved the field of battle left the next day this vast cemetery and went with a majestic slowness to take position around the Château of Finkenstein. It was thought that three days of repose were necessary; three days of rest were to be given and the retrograde march continued.

"A halt was made and camp pitched upon the snow; the men disperse, cease to hate each other; they hesitate, they return, the army rallies; convoys of provisions wind across the plains of Poland; and from this famous camp Austria is threatened, Prussia is held in check, the Duchy of Warsaw is organized, Russia is menaced, and the peace of Tilsitt crowns such a good determination."

During the campaign of 1807 water-ways were made use of whenever it was possible, and especially on the Vistula and Oder. Sometimes they did not control both banks, but they were nearly always successful in accomplishing the orders of the staff.

The transports by water accomplished by the sailors of the Imperial Guard may be especially mentioned. In March, 1807, during the siege of Dantzig, they transported from Thorn to Marienwerder, on the Vistula, boats loaded with supplies. They had to contend against floating ice and the fire from the fortified island and fort of Graudenz; they passed under this fire during the night by remaining below in the boats, which they allowed to float with the current, and only steered them.

The lines of communication were very well organized during the campaign in Poland by the officers of the commissariat, and it was due to the intelligent arrangement made by this corps that the French army was able to traverse such great distances and to move with unprecedented rapidity to the banks of the Vistula.

These lines of communication, being entirely under the control of the commissaries, enabled them to supply in an admirable manner the

different magazines of the army, and particularly those for the camp of Finkenstein; the requisitions were then imposed almost exclusively by the commissariat, and it was only in exceptional cases that they were enforced by the troops themselves.

All the services in the rear were placed under the control of the intendant-general of the army; they contributed to the subsistence of the passing detachments and to the supply of the magazines.[4]

Upon the whole, the working of the subsistence service gave very good results during the operations in Poland; by maintaining the army in excellent condition, by avoiding marauding, and, consequently, the desertions, it enabled our valiant soldiers—very much tried at Eylau—to seize Dantzig, to struggle advantageously against the Russians at Heilsberg, and to totally defeat them at Friedland the 14th of June, the anniversary of the victory of Marengo.

### *Camp of Finkenstein.*

To end the history of the supply in the campaign of 1807, we give, in a few lines, a brief account of the administrative services of the camp of Finkenstein.

*Administrative Staff.*—Intendant-General Daru had under his orders on April 1, 1807, one hundred and thirty-five commissaries, of which forty-three were at head-quarters and ninety-two on the lines of communication; as for the treasury staff, it was very large in numbers.

*Financial Resources.*—At the beginning of 1807 the treasury was poorly supplied, notwithstanding the payments of the contributions imposed upon the conquered countries and collected by a collector-general under the orders of Daru.

Pay was several months in arrears, and after Tilsitt it still was not entirely paid off.

[4] In Austria there is no service of the line of communication and of railways properly so called.

"In the rear of the armies during active operations and upon the national territory, in principle, reserve establishments, magazines, or stationary hospitals are organized as bases for the production and for the supply of the army. From these establishments the lines of communication start, upon which, at long intervals, magazines or stations are organized, establishments relatively stationary, where an effort is made to further develop the production and supplying of the magazines and hospitals in the field, moving one or two stations in rear of the troops." ("Cours de Legislation et d'Administration militaires," par M. l'Intendant-Général Delaperrierre.)

The field magazines, at the rate of one for each army corps, are under the control of the commissariat. The movable magazines or stations are organized by the army, and are also under the immediate control of the commissariat; as regards the reserve establishments, they are placed under the direction of the administrative authorities of the interior, but the commissariat of the army gives the orders concerning the consignments to be made to the troops in the field. It should be stated, however, that each magazine has a commission consisting of a superior officer, a sous-intendant, and a civil commissioner.

The emperor caused the greatest economy to be exercised; not a crown came from France, and the treasury was often empty.

*Magazines of Stores and Ovens.*—The principal bakeries were established at Posen, Glogau, Warsaw, Braunberg, Osterode, Thorn, Elbing, and Marienwerder.

At Posen the ovens could produce eighty thousand rations; at Glogau biscuits were made.

Stores were likewise procured from the military bakeries and magazines organized the year before at Spandau, Stettin, and Custrin.

From Warsaw flour and grain were sent, and there was great difficulty in having the latter ground, as mills were lacking.

The capture of Dantzig procured us two hundred thousand quintals of grain and three thousand hectoliters of wine or brandy.

At the camp of Finkenstein and at Thorn there were established, towards the end of the stay there, six ovens, yielding fifteen thousand rations each.[5]

On the march to Friedland and the Niemen, and during the negotiations for peace, the armies were supplied by the three station magazines of Heilsberg on the Alle, Welhau on the Pregel, and Tilsitt.

*Resources of the Countries.*—The resources found in the villages were made use of, with the assistance of the Polish authorities.

In his study of the campaign of 1806–7, Intendant-General Baratier describes the measures adopted by the military authorities to collect the supplies of all kinds found in the zones of supply of the corps.

"It is very instructive," says he, "to find in the correspondence with what care each corps commander had the country ransacked to find grain, to beat the corn, to dig the potatoes, collect the cattle, to establish numerous ovens, and to have everything concentrated in the divisional magazines, which were properly administered and protected against pillage."

In spite of all these precautions, only in the camp of Finkenstein were the troops properly supplied.

*Forage.*—Forage was often lacking, and even in May, 1807, there was a great deal of difficulty to supply the horses; it was necessary to take the thatch from the houses to feed them.

*Clothing and Shoes.*—Workshops were established in Hamburg, Bremen, Leibeck, Magdeburg, Berlin, Stettin, and Frankfort; great-coats and shoes were made there. The supply was about two pair per man.

*Transports.*—The transport service, composed of five hundred and nine four-horse wagons at the beginning of the campaign of 1806, was increased by the addition of requisition wagons; however, it was insufficient to guard against the great necessities of the army and

[5] These ovens each constituted a field bakery.

to provide convoys on roads broken up and hardly passable; the rains, moreover, added to the difficulties already so numerous in Poland.

The number of wagons, "too limited in every case, did not alone occupy Napoleon's attention; but the difficulties of conveyance, of escort, of supervision, likewise demanded his care." (Intendant-General Baratier.)

The emperor said, "Our armies will only be properly organized when there is no longer in them a single civil administrative agent, but every one will be a soldier."

He then suppressed Breidt, the contractor for transport, and took his stock to form the wagon train; nevertheless, it was necessary still to resort to contracts for the supply of Thorn and the cantonments, and towards the middle of May the supply was assured in a very satisfactory manner.

It may be concluded from what precedes that the large stores collected at Thorn and in the neighboring magazines of Elbing, Osterode, Marienwerder, as well as the organization of the transports, and of the wagon train, made it possible to reorganize and to build up the troops who fought at Eylau and had suffered so much during the campaign of 1806 and the beginning of 1807.

## SECTION VII.

### NEAPOLITAN EXPEDITION—WAR IN PORTUGAL AND SPAIN.

#### *Neapolitan Expedition.*

If armies ever were stripped of everything, improperly supplied, and destitute of clothes, such were the armies in the Neapolitan expedition and the war in Portugal.

In conformity with the plans of Napoleon, the countries should suffice for their wants; but in countries as poor as the Calabrian and Portuguese provinces these armies would lack money, provisions, and clothes.

For the Neapolitan expedition, in 1806, the emperor thought that the countries could maintain the army; he did nothing for it.

During the expedition King Joseph frequently complained to his brother of the distress to which the French troops were reduced. Upon his arrival in the kingdom of Naples they lacked everything, organization, transports of all kinds, ambulances, and even pay. The Comte de Ségur says in his "Mémoires" that they had not been paid for four months. Their shoes were all worn out; there was not a sou in the treasury, as Queen Caroline had taken everything that she found in it. Finally, there was hardly any ammunition. It was necessary to enter the kingdom impoverished with debts, and King Joseph could pay for nothing. To his frequent demands the emperor invariably replied that the occupied or conquered countries should supply everything. In a letter he said to him,—

"That he had sent him to conquer a kingdom and not to buy it; that undoubtedly nothing could be done without money, but that the conquered and not the conquerors should give it; . . . that he should impose a contribution of thirty millions, seize the property of the convents, and confiscate for the benefit of the treasury and for his own wants such possessions of recalcitrants as were abandoned by their emigration; that, as regards our army, he alone should pay, recompense, and support it by his victories, banishing, however, pillaging and robbery, which he abhorred."

The French troops suffered very much in the kingdom of Naples, the country being able to furnish but little to supply their wants. Some fields rich in corn, olives, and fruit furnished them some resources, but such was not the case in desert countries infected by swamps or crossed by rapid torrents,—countries that were so vast that our troops were obliged to completely traverse them in order to put them under submission.

The wagons were drawn by oxen and transports were extremely difficult, and the crossings of the torrents very long and dangerous. Such were the difficulties and destitution that our soldiers experienced in the kingdom of Naples, and which they were to experience again in Portugal and Spain. Our armies were again to see the massacre of individual soldiers, stragglers, and marauders in the Sierras of Spain and in the mountains of Portugal, as in Abruzzi and Calabria.

*Portugal.*

*First Invasion.*—At the time of the entry of Junot in Portugal the troops found but little in the country, as the peasants had taken away everything upon the announcement of their approach.

The arrangements had been very incomplete; there was also the greatest difficulty to supply the regiments. It was thought that supplies had been collected at Alcantara. Such was not the case, and the young soldiers who composed the army, deprived of nourishment, knocked up by night marches and muddy roads, or in the mountains, were very much worn out. Having arrived at Lisbon, Junot there rested his soldiers, who needed it greatly.

After the disembarkment of Lord Wellesley, fighting was again resumed, and our troops had again to undergo marches and privations of all sorts, for the countries occupied, hostile to the French, did not afford them any resources or provisions.

The capitulation of Cintra, signed by the Duc d'Abrantès, was then a source of relief.

*Second Invasion.*—When Marshal Soult entered Portugal after the victory of Corunna gained over the English General Moore, he experienced the greatest difficulties in subsisting his troops there. The commissariat received nothing from France, and as he was obliged to

depend upon the resources of a country ravaged by its inhabitants, provisions were lacking.

An order of the Portuguese government had threatened with death every citizen who, upon the approach of the French, did not leave his homestead. In fleeing, every inhabitant was to destroy the means of subsistence, provisions, mills, and ovens. The army encountered, then, upon its march only abandoned villages which had been set on fire, and were obliged to send detachments in the neighboring country and in the mountains to collect provisions and forage. However, but very little was collected: some hogs of which the unwholesome meat had a bad effect upon the health of the men, flour of maize, some vegetables, potatoes, and some wine, of which it was impossible to prevent the men, under many circumstances, from making an immoderate use.

During this time the English troops, which were so stationed as to command the sea and ports, had immense magazines which were stocked by their ships and supplied in their turn the convoys of the columns.

Payment was not only promptly made by the English troops, but the requisitions being paid in cash, enabled the British army to find in towns and villages everything that was required. Moreover, these requisitions resulted in increasing the resources of the English and husbanding the supplies brought by their vessels. The convoys of the columns were supplied with provisions and *matériel* by hundreds of pack-trains of mules, which were wonderfully well organized, and which covered the distance between Lisbon and Oporto, and between those cities and the points of operation.

It is also necessary to state that the English, like Frederick the Great, often subordinated the march of their troops to that of their convoys. Thus, later, after the battle of Salamanca, this was, according to General John, the cause of their delay in undertaking the pursuit of the French army.

Upon entering Portugal, the troops of Marshal Soult, badly clothed, badly equipped, in want of shoes, were compelled to supply these wants by utilizing all sorts of cloths, linens, and skins which they could obtain.

The shoes hurriedly bought in Bordeaux and Bayonne and those furnished by the state magazines were of bad quality. They did not last long on the marches. According to some military writers, this part of the clothing was very often defective, the contractors being rarely placed under superintendence during the time of the empire.

The remainder of the equipment of the army in Portugal was insufficient or bad in quality. The soldiers passed through the entire winter with trousers of linen or homespun, many of them also without great-coats.

To remedy all these difficulties the chief contractor, Lenoble, used,

as much as possible, the clothing taken from the English army at Corunna; about three thousand great-coats were distributed among the regiments; several thousand shoes were distributed; others were made from the leather found, and, finally, large pantaloons were made from the cloth obtained at Santiago.

In the convents turned into barracks the men were instructed how to make clothing and to repair their shoes during moments of repose; in addition, such shoemakers as were found were made use of.

The supply of provisions was much more difficult; the commissaries and their agents, obliged to detach themselves from the columns, were often surprised, and many were massacred by the peasants. One-third of their number perished in this way.

The flour which was found in the villages was collected, as well as the grain not carried off or destroyed by the inhabitants, and millers and bakers, furnished by the regiments and placed under the orders of the commissariat, performed the different labors connected with the grinding and making bread. Other soldiers, butchers by trade, killed the animals which had been requisitioned or bought. Bread was the scarcest provision. The peasants had not only destroyed their resources of grain and flour, but the supplies furnished from abroad still remained in ports, and these supplies formed about half of the total consumption of the population.

Notwithstanding the bad method of recruitment of the subaltern agents of the commissariat, formed in haste upon the outbreak of the war, better results were obtained by them than during the campaigns in Italy. The exigencies of the case, fatigues and dangers which they had to share with the soldiers finally, the wants of the soldiers, compelled Marshal Soult to demand later the formation of a military corps, which, belonging to the army and interested more in its successes, obtained better results.

The treasury of the army was no longer supplied from France, and, as it was deemed impolitic to impose contributions for fear of causing a revolt, payment could no longer be made. Later, recourse was obliged to be made to a loan among the officers in order to raise the funds; one regiment furnished alone eighty thousand francs. Finally, at Oporto, an attempt was made to sell the merchandise and the wine seized on the enemy's ships, but there were no buyers.

*Third Invasion.*—When Masséna advanced upon Lisbon and hurled himself upon the lines of Torres Vedras, he had the same difficulties in supplying his armies with provisions, forage, money, and clothing. There were the same sufferings and the same want, and, in his forward march as well as during his magnificent retreat (that is to say, six months), he found only insufficient resources, the convoys being very few in number and the countries deserted and devastated by the inhabitants and the English.

In short, in these three invasions, the French troops were particularly in want of bread on account of the deficiency of grain and the means of grinding. The absence of these last means has been the cause of great privations; if, as in the army of Frederick, there were always hand-mills, they would have been enabled to procure flour, coarse, it is true, but which would be able to yield hasty pudding or an acceptable kind of bread.

In 1811, Marshal Marmont made an attempt of this kind in Portugal. The mills which he had made were worked by one man. One would suffice, by working for four hours, for the wants of a company; during this time sixty kilogrammes of flour were obtained.[6] Although this method is very primitive one should not disdain it, and perhaps we will be obliged some day to make use of it as did our fathers in the army in Portugal, and as did also the soldiers of Frederick the Great.

*Spain.*

After February, 1808, seventy thousand French and Italians had been introduced, according to Junot, in the Peninsula, and Spain had received them as friends, lodged and nourished them, when, suddenly, in accordance with the orders of Napoleon, all the fortified places were taken by surprise. Charles the Fourth and his son were dethroned; then Spain raised up in arms; all our convoys were pillaged, their escorts massacred, the stragglers, the individual soldiers were assassinated by the Spaniards, excited by their priests and monks. The small detachments were no longer safe. The merciless war, which was to cost us more than three hundred thousand men, extended from San Sabastian and Saragossa to Cadiz. All Spain had risen to drive out the invader and to avenge King Charles the Fourth and the Prince of the Asturies, who were deceived by Napoleon at Bayonne.

Then began with our troops the sufferings and unheard-of fatigues which they had to endure in Spain.

Murat, who commanded the army, had none of the qualities of an administrator; however, with the exception of Davout, Saint-Cyr, Suchet, and Soult, there were then very few generals possessing administrative aptitudes.

The men, broken down by the marches, the bivouacs, the irregularity of issues, the lack of medicines and hospitals, fell along the roads. The typhus fever raged in most of the garrisons, and, as the hospitals were in need of everything, the army was decimated in a very short time.

On the 22d of July, 1808, General Dupont, having only young soldiers, worn out by fatigue and heat, without provisions, without shelter, almost without water, capitulated with twenty thousand men.

[6] The model of these mills is in the Conservatoire des Arts et Métiers.

Some days after Joseph abandoned his new capital and asked the assistance of Napoleon.

The emperor then entered Spain with an imposing army to conquer Madrid; but, although there was a well-organized line of communication starting out at Bayonne, the French troops had, a greater part of the time, to live by pillaging; moreover, the meagre resources of the countries traversed were very soon exhausted, and, even if the enemy had not ravaged any part of the villages and fields, it would have been difficult to obtain subsistence there for any time.

As General von der Goltz says, "These crowds of men who run over a country like a cloud of grasshoppers, devouring everything, can only be fed for a very short time with the provisions which they find in the scattered households."

At Burgas no issue was made to the troops, and, the necessity for each one to provide himself with provisions serving as a pretext, nothing escaped the pillaging.

General de Ségur says, in his "Mémoires," that it was the same in nearly all the towns abandoned by their inhabitants. The exasperation caused by hunger and fatigue, and the darkness upon arriving at the cantonments in the night, inclined the soldiers to all sorts of excesses. A great many became drunk and sacked the houses and burned the furniture, wishing thus to avenge their brothers in arms who had been assassinated by the citizens.

The emperor, not being able to provide the supplies for his troops, was powerless to arrest pillaging.

The victories of Tudela and of Sommo-Sierra opened to Napoleon the gates of Madrid. In this city the inhabitants were protected; a soldier of the Young Guard was even shot for a small theft. During his stay in this capital the emperor reorganized a few of his troops; but he was soon obliged to leave there to pursue the English, then to return to France in order to make preparations for a new war against Austria.

After the capture of Madrid the supply of the army was in part assured by means of the line of communication starting at Bayonne and ending at the capital. During four years this line resisted the attacks of guerillas; some convoys were seized, but that did not prevent its being constantly of use, and almost the only means of supplying the army; it was at one time extended as far as Cadiz.

However, the wants were so great that the convoys could not suffice; as cash was wanting to the army and to the new king of Spain, Joseph, it was very difficult to provide against the insufficiency of the consignments from France, particularly in clothing, shoes, and linen.

In the following lines will be shown what distributions were made to the troops in Spain and what were their principal wants.

The author of the "Souvenir d'un Militaire des Armées Françaises de Portugal" says, in speaking of the armies of Soult and of Ney, "When, in order to build up their exhausted strength, these troops required good nourishment, they scarcely received a quarter and even an eighth of the ration of bread or biscuit, three or four ounces of meat, and a very small ration of brandy. Salt was totally lacking, and without this seasoning, which nothing else can replace, it was impossible to prepare the food.

"Great difficulty was also experienced to repair the clothing and shoes. When their shoes were almost completely worn out a great many of the soldiers thought of covering their old shoes with the skins of animals which they had killed, and thus making for themselves a kind of sandal. This expedient was of very little good; when the heat became perceptible, the skin, which was employed without any preparation, shrunk and rubbed their feet so that the men were soon obliged to go barefooted. Several hundreds of pairs of shoes that were brought from Corunna were distributed among the corps of the army; as they came from the government magazines they did not last more than two or three days on a march.

"There was not a sou to meet these absolutely necessary expenses. It was wholly impossible to raise contributions in the country. In such a predicament Marshal Soult again addressed his troops; he solicited a loan and obtained the amount of one hundred and twenty-five thousand francs."

Our troops, though often camped on fertile plains covered with crops, experienced great privations from lack of provisions. Convoys, frequently stopped by guerrillas, did not reach their destination. And, as later in Mexico, it was necessary to escort them with one or two companies or even a battalion.[7]

It was with the greatest difficulty that the detached troops or those on the march were enabled to obtain bread.

Each day a certain number of companies from the different regiments set out with arms and baggage-wagons and repaired to the plains, which were still covered with their crops. The men plucked the grain, threshed it, and collected it in their sacks, then carried it back to camp. Other companies went several leagues from there to find the means to grind it, then carried flour to the nearest villages to make it into bread.

[7] In Mexico very great difficulties were experienced in supplying the columns. The Intendant Friant and his assistants and administrative officers encountered similar difficulties to those of the armies of Spain and Portugal. The convoys for supply were often attacked; several administrative officers speaking Spanish, dressed as Mexican horsemen, went to the haciendas, accompanied by the Chasseurs d'Afrique, and bought their provisions, which the sellers thought were intended for their own country people. Favret, chief administrative officer (the inventor of the field tent), was one of these bold purveyors.

However, often neither mill nor oven was found; it was then necessary to prepare the grain in such a manner as it could be eaten. The contractor, Lenoble, devised a method of preparation of the grain which allowed the soldiers to use the article which could not be ground.

Great difficulties were also encountered for the supply of meat; the herds of sheep had been taken away by the peasants; as to the beeves, they had been turned loose in the woods, and it was necessary to hunt these animals and shoot them. The regular issues of meat were exceedingly rare.

If our armies in Spain had had, as we do now, preserved canned meats, they would have been enabled to supply themselves very easily.

"What would Napoleon not have given if he had had at his control this method of subsisting his troops." (Von der Goltz.)

One may well imagine what were the unheard-of difficulties encountered by our troops, who, worn out by the marches and heat, lacking shoes, with clothing too warm for countries such as Spain, found it necessary to ransack the neighboring country, collect the grain, grind it, make bread, and drive in the cattle which were to be killed later on.

Thiers thus describes the situation of the armies in Spain, after Arapyles and Vittoria, that is, in 1814: "Accustomed to being supplied by no regular system, but to live solely upon what they extorted from the population which they hated and by whom they were hated, they came to regard themselves as owners of everything which came under their hand, and even upon their return to France it is not probable that they changed their manner of thinking, if they did change their manner of living. Ragged, sunburnt, ill-tempered, arrogant, commanded by officers still more to be complained of than they, and who did not dare to show their ragged clothing, they presented a most affecting spectacle, that of brave soldiers controlled by vice and in great poverty."

Marshal Suchet in Aragon had organized the country and his army; the condition of this one was relatively good. At Lerida, Tortose, and Tarragone, the garrisons had a year's supply of provisions. The men were well clothed, well supplied, and well disciplined. The people were protected by them against the disorders of the war.

Thanks to his skillful administration, Marshal Suchet possessed then good troops, and his regiments numbered very few deserters and marauders, their wants being always assured.

It was not the same with the troops of Marshal Soult, and, notwithstanding his great administrative capacities, his regiments, deprived of everything, had less cohesion, less discipline, and, moreover, less chances of conquering.[8]

[8] In 1812 the losses of the armies in Spain were three hundred thousand men (French and allies); four hundred thousand men entered the Peninsula in 1808 and

## SECTION VIII.

### ESSLING AND WAGRAM. (1809.)

In this campaign Napoleon, having seen the inconveniences of the system made use of by him during the campaigns of 1805–6–7, collected upon the upper Danube very large quantities of stores, and created centres of supplies echeloned every twenty leagues. The principal magazines were established at Augsburg and Donauwerth.[9]

The emperor was convinced that henceforth he should no longer rely only upon the local resources, but that he should augment them by the resources from the rear.

Moreover, in the countries traversed, as the Austrian army had already imposed requisitions, they did not provide sufficient resources for the supply of the French army. Further, the prolonged halt of the French in the neighborhood of Vienna would not permit them to depend solely on the resources of the country. The emperor was then obliged to establish centres of supply on the Danube, which were stocked from the rear, by shipments from the base to the advanced magazines, as the army advanced.

Before setting out from France, Napoleon had organized his numerous magazines and had disposed them so as to provide either for attack or defense. The supplies of provisions for the hospitals were bought in Suabia and Bavaria, and he organized companies of workmen, masons, bakers, and others, which he recognized to be necessary for the supply of the army. Later he formed them into battalions of workmen belonging to the administration (1813).

The capture of the Austrian magazines near Eckmuhl and Ratisbonne greatly facilitated the supply of the army at the opening of the campaign. Later, General Hiller having been defeated at Ebersberg, the emperor, then master of the Danube, took the greatest precautions in utilizing this river for the transport of his provisions and wounded.[10]

Still later, after Vienna was seized, he had to govern and support an immense population, as well as eighty thousand French and allies, in the presence of hostile armies numbering one hundred thousand. This problem was solved; and he did the same for the supplies of provisions of the army which, under Marshals Lannes and Masséna, was assembled in the island of Lobau, to attempt the passage opposite

1809, one hundred and fifty thousand in 1810, and sixty thousand in 1811. At the time of the Russian campaign there were only three hundred thousand of them left, of which number one hundred and seventy thousand were fit for active service.

[9] The magazines of Augsbourg were established by Bavaria, which furnished one million rations of biscuits; those of Donauwerth, at the expense of France; two millions of rations of bread could be made there.

[10] Only seven hundred wagons were obtained from the train formed by means of five battalions, but a great many boats were available.

Aspern and Essling. The retreat which followed the defeat of Essling did not prevent Napoleon establishing himself strongly in the island of Lobau, and organizing there his magazines and considerable supplies. For then he had about one hundred and fifty thousand men to supply, which is a very difficult operation in the presence of a numerous and vigilant enemy. The victory of Wagram enabled the emperor to impose a contribution of two hundred millions upon the conquered Austrian provinces. He could then provide his troops with provisions of all kinds until the Peace of Vienna, which terminated the war.

It may be seen from the foregoing that Napoleon had changed somewhat his system of supply. He was convinced that with large bodies of men, such as those he led into Austria, it was indispensable to have supplies, magazines at the base of operation and upon the lines of communications, and that, moreover, special troops, whose duty it was to provide the supplies, were a necessity.

The formation of magazines, however, led to extreme measures, exactly the opposite of those employed in the campaign of 1805; thus, flour had been sent from Metz and Nancy to Donauwerth.[11]

The emperor criticised this manner of acting, for it was easy to supply one's self from Bavaria and Bohemia. He suggested to Daru to bring from France only such provisions and clothing as could not be obtained in the countries occupied.

[11] At Donauwerth ovens were constructed capable of baking about thirty thousand rations of bread a day. To this place were sent quantities of biscuits made at Munich, Ingolstadt, Augsburg, Passau, and Ulm, and the clothing, shoes, and ammunition drawn from the depots of Davout's army. This city was thence a true station magazine which was to provide for the wants of the army corps by transports sent either by land or by the Danube.

(To be continued.)

## *YESTERDAY IN ANNAPOLIS.*

WHERE the Severn River pulses the bay,
Chesapeake, speeding down to the sea,
Is a rambling colonial city. Men say
'Tis finished. 'Twas finished this many a day.
A quaint, pretty city; its plan doth agree
With Washington's own in a miniature way;
The hubs of two wheels, the spokes running free
Towards river and creeks which gird it about,
And make it half island; this serving, no doubt,
To give it the charm of old-fashioned reserve.
For cities, like maidens, a something preserve
Of grace when set back from the every-day track;
This holds good of Annapolis girls, I observe;
These fair gentle ladies bear good ancient names,
And are almost all Colonial Dames.

Gentle and stately, look where you please,
You'll find no maidens fitter than these
To be sweethearts of admirals of the high seas,—
Rank all navy boys mean to attain,
When school-days are over and life's mighty main
Opens out with its danger, hope, and allure,
Which the brave boys in blue face with courage secure.
One may safely assert the Academy walls
Inclose an oasis of confident youth
The like of which earth matches rare in truth,—
The way is made smooth of traps and pitfalls;
If ever life gains the ideal 'tis here.
The flower of the country, her boys without peer,
Are trained here in service and honor; and dear
Through the play and parade, insistent as bell,
Undertones the Republic, Be worthy as well.

These are days of ease and content,
Dearly bought by brave blood spilled;
This very oasis, a dream fulfilled
Of days when the whole land lay forespent.

Our gay cadets in blue and gold
Play at the game was played of old,
Grim and earnest, at sea, on land
(Fort Fisher, Monitor, Cumberland):
They were bequeathed the right to play
By the daring lads of yesterday!
Yesterday! Round me I gaze.
Here where Severn fleets her ways
The trim Academy holds fair state;
Guards at upper and lower gate;
Walks well kept as a quarter-deck;
Here, a figure-head from a wreck;
There, a cannon captured in war;
Memories these like a guiding star!
While pacing leisurely under the trees
(Half a century's growth are these;
Fifty years since the plan of a school
Ashore, not afloat, became here the rule),
Under kind shade, girls from the town
Of Annapolis stroll up and down
With the fine cadets, who glory and fame
Are as sure to win as the sun to flame.
But yesterday it was different. Then,
Deeds, not words, made a man of men.
Nay, in the mêlée, a resolute deed
Fell to earth sometimes without due heed.
I mind me well of one sailor lad
Whose deed died tongueless, such luck he had!
For his sweetheart's sake he cared to succeed;
For her sake silence was grateful meed.
Such tangled motives involve my tale,
To state each clearly would be to fail
To tell in order what came to pass
In wooing and wedding just such a lass,
Gentle and stately, as Maryland calls
Daughter yet in her fathers' halls.
Mary Calvert worthily came
Of those who planted the cross in the name
Of the king, and ever counted it shame
Not to be true to the Church and the State
In lands their sons keep free and great.
Hence Leonard Calvert delighted most
His cousin Mary when he made boast
Of service rendered to stars and stripes,
Honest service, faithfully paid.

He had failings, was wayward and weak;
But high courage such stain outwipes,
In the world's esteem, who excuses made
For the fickle will, blown here and there
By each gust of folly and devil-may-care,
That yet achieved what it willed to dare.
As a mother hopes on for her erring child,
So Mary with tears on her lover smiled.
Meantime, unjust was Leonard to blame
Luck, fortune, whatever you call by name
Her who in the end is an honest old dame,
For his own ill-luck; after all, a part
Of the man he was, mind of mind, heart of heart;
He somehow missed his grip on the rein
Of his fate; because he curbed not in the main
His own inner spirit. As we count nowadays,
Mere boy as he was, he had merited praise
For courage and daring in more than one fight.
Yet somehow lacked purpose; and Mary's delight
In his splendid audacity overtook fright,
Lest failure to use his high gifts and aspire
To effort beyond should drag all through the mire.
So she pitied; she loved. Loved! Still, could not give
Her heart to his keeping, through years both must live
When brief days of passion and valor had run;
Still she pitied; she cared! He was pleading his cause
One fair evening, as often, with feeling, with pause.
They paced Lover's Walk, screened from afternoon sun
By fragrant acacias; Herndon's monument stood
And mutely incited to loftiest mood.
Before them rolled seaward the gleaming bright bay;
And love and life matched the month and the day,—
All nature sides with a lover in May!
Far off where sky met bay some sails
Lay touched with light. Mary prevails
To turn the talk: "What ships are those?"
Leonard replies: "Ours now. By morn the foe's;
Or, mayhap, fathom deep, a rebel ram
Is prowling outside. Would that Uncle Sam
Had fifty like her! She's a thing to dread.
She's waiting a dark night. One's due, I fear.
She will steam in, deal havoc, disappear.
A plague upon her!" "This blue sky o'erhead,"
Cried Mary, with clasped hands: "this lovely world,
One moment,—then, whereunto hurled?

Oh, dreadful!" she repeated; "such a death
For those poor fellows! But, my dear,
I'm glad, at least, you are in safety here.
On the sick-list, hands tied for ten days more.
You long to go; but you must stay ashore."

"You care then, Mary? Truly, do you care?"
And she smiled softly. Ah, her life to share!
To win her pure, strong heart, what greater bliss?
Nor winning her, a man would heaven miss,
And walk in outer darkness of the soul.
How can he risk such loss, so near the goal?
Yet as he knew, his life hung by a thread,
By his own choice. When day was dead
He would chance all upon one throw:
He would take boat; pull past yon fleet;
Take a torpedo from the last ship; row,
With muffled oars, into mid-channel; go
As close as might be to the rebel boat,
Then deftly let his deadly cargo float
Against the ram, with wind and tide his way,
To do its deadly work upon the night-dark bay.

But of all this no hint to her. The sun
Dies slowly from the day. His task is done
As he had planned. Clouds veil the moon;
He drops his shell far out; nor yet too soon,
Had the Confederate held to the attack,
As threatened; but tide turning, in the black
Of midnight, off the ram to sea
Steamed from the evil change confined
For her in tide and wind.
No thought of Leonard's errand grim
Was Mary's through that sleepless hour;
No hint had she of danger facing him;
But as she prayed her steadfast eyes grew dim,—
"O God, keep very close, defend him with thy power."

When Leonard's midnight raid was done,
He anxiously waited the rise of sun
On the seaward ship of the fleet.
So when the rebel showed her feet,
He knew his plan had miscarried:
Somehow, destruction had tarried.

Had the fuse burned out in the dark?
The bomb failed to light at the spark?
As the peaceful day dawned bright,
Violence shrank out of sight;
Risked his life vainly he had;
But in his soul's inmost was glad.

Then—then—suddenly he was aware
Of a lurking danger where
He looked for it least in the night:
The shell he had sped out of sight,
Launched forth in the foe's despite,
Its errand had failed to fulfill;
Nay,—worse luck,—was burning still,
And close to the vessel where, dismayed,
Leonard the doubtful chances weighed.
The explosion was sure to come,
With hideous rending of sky and wave;
By hazard of some mischance the bomb
Far and wide would make a grave
For the friends he had planned to save!

An awful peril. Swift as brave,
Leonard grasped it. His boat lay moored,
Whence at midnight he leaped aboard.
In he sprang. With a will and a way
He pulled his skiff where towards the bay
The nightmare spluttered and fizzed. He caught
The line again whereby he had brought
The thing from shore, and close beside
His boat lashed the shell; stemming the tide,
He rowed with strength born of despair
To a point undoubtedly safe; and there
He left the seething horror, and back
He put his boat in his own wake's track.
That rending of sea and of sky surely came,
In a horrid blending of smoke and flame,
And whether in it he were, or out,
Leonard Calvert felt serious doubt.
But one thing was certain: a terrible blow
Was turned by the mercy of God from the foe.
A woman tells the story; maybe,
In the awful turmoil of soul and sea,
It flashed in the thought of our sailor lad
That the dare-devil risk he accepted had

A touch of, shall I say dastardly? showed
He took his life in his hand as he rowed,
And war is war, and its splendid wage,
Blazon of glory on history's page,
Hath its own excuse, in its own rash code.
So Leonard Calvert's deed that night
Won his spurs and set his feet
On the ladder that climbs away from defeat
To the blinding dazzle that crowns the height.

But Mary? Ah, Mary! Her proud heart thrilled
When she heard of the self-imposed errand fulfilled.
'Twas like him, like Leonard. No pause twixt the thought
And the deed that rescue to comrades had brought.
"I loved you so, darling," he whispered, "I knew
That doing less life were unworthy of you.
So death rather, sweetest!" And in that high hour
Her lover lacked nothing of force and of power.

She yielded; and yielding gave love's utmost dower.
And if, in return, he offered her less,
A man's reservation, the truth to confess,
Is wisdom for men who counsel should keep
On matters for womanly judgment too deep.
Well, a woman's mind has twists; to this day
Mary holds when the rebels steamed away
They left the deadly missile astray.
What timely errand brought Leonard there
She never chanced to hear him declare.

Seasons come and seasons go;
Ways of men pass to and fro;
Man and maid upon the earth
Love in mourning, love in mirth.
Outward changes somehow miss
Small serene Annapolis;
Bluest Severn speeds away
To its haven in the bay.
Statelier, stricter grows the rule
Where the navy goes to school;
Denser in Lover's Walk the shade
Where the boys in blue and gold
Tell the tale that's never old
To each gentle, stately maid.

Here Mary lives, absorbed in Leonard's aims,
His happy wife. Yet, that the service claims
One-third his time as well. Somewhat intense
The worship of a wife who scorns pretense,
And yet who sets so high the man she loves, no doubt,
He has a wholesome dread that she may find him out!
Perhaps the danger less than he imagines. None
So blind as those who will not see the sun!

K. R. L.

# ARAB MEN AND ARAB HORSES.[1]

It is close on forty years since "Maga" last found room for an article on the "Ishmaelite," or Bedouin nations of Arabia and their famous breed of blood-horses.[2] In that long period many stores of fresh information on this subject have been opened. Passing over Palgrave's not very trustworthy account of the Nejdean horses, the field of genuine inquiry has been diligently and fruitfully cultivated by the Lady Anne and Mr. W. S. Blunt. Another traveled expert and ardent lover of Arab horses—the late Major Roger Upton—has laid us under similar obligations. And now there has been produced a book, "written at Baghdad, between 1885 and 1891, in such intervals of leisure as consular duties permitted," in which is to be found, alongside of many new treasures, the sum of all that is worth retaining in the collections of previous gleaners in this by-path of natural history.[3] General Tweedie's noble quarto, on which the present paper is wholly founded, would have received earlier notice but for the large scale on which it is planned, and the consequent difficulty of dealing with its contents in necessarily narrow limits. This difficulty still, of course, presents itself; but it must not be allowed to stay our hands any longer. And the first point to invite remark is that, in the space of exactly four hundred pages, there is here written, not only the "Book of the Arabian Horse," but also the "Book of Arabia and the Arabs." This feature reveals itself in the title, the quaintness of which may even suggest the apprehension that the author prefers horses to human beings, and wishes to apply to Arabia one of the best-known pieces of satire in "Gulliver's Travels." The reader may, however, rest assured on this point. One who writes with the special object of waging war on crude assumptions, and dispersing the mirages of fable, is but little likely to strain his own inventive faculties, or intentionally turn

[1] Reprinted from *Blackwood's Magazine* by permission of Leonard Scott Publishing Company, of New York, the American publishers of *Blackwood's Magazine*.

[2] "Horse-Dealing in Syria," *Blackwood's Magazine*, September–October, 1859.

[3] The Arabian Horse: His Country and People. With Portraits of typical or famous Arabians, and other Illustrations. Also a Map of the Country of the Arabian Horse, and a descriptive Glossary of Arabic Words and Proper Names. By Major-General W. Tweedie, C.S.I., for many years H.B.M.'s Consul-General, Baghdad, and Political Resident for the Government of India in Turkish Arabia. William Blackwood & Sons, Edinburgh and London: 1894.

things topsy-turvy. The title bears the proper close relation to the central thesis of the volume, which is, that "the breed of horses standing first in seniority of all the high-bred coursers of the world" has for its factors at once the physical elements ("water and air") of Arabia, and the manners and traditional rules of horse-breeding which prevail among the Bedawee. To many, such a representation may seem too evident to require stating. But it has to be remembered that, equally in Europe, America, and Australia, the air supports a nebulous theory that the authentic breed of Arab horses has been handed down from the time of the Hebrew patriarchs. Most Englishmen receive this assertion with a shrug of the shoulders. Subsequently to the period when the existing strains of the English blood-horse were brought to perfection, our breeders of race-horses have rarely recurred to Eastern blood. This attitude on their part amounts to a recognition, on common-sense grounds, and apart from all writings, of the principle laid down by the scientific, that a crossed-breed can certainly, in the course of a few generations, be fixed and made uniform.[4] None the less, many will welcome the new facts tending in the same direction which this latest study of Arab history demonstrates. From every point of view, and not merely from the horseman's, it was in a happy moment that the author saw the necessity of depicting first the country and then the people, before bringing in his principal figures, the noble mares, compared by the Arabs to "high-born ladies on whom it is meet that all maidens should attend." If, in pursuing this course, he has imparted to the product of his labor somewhat of the character of an Encyclopædia Arabica rather than of a simple monograph, the value of his work is by so much the greater. In the sequel we shall take leave to find some fault, and indicate places where General Tweedie rides for a fall, if ever an author did so; therefore it is the more agreeable to set out with unqualified expressions of approval. On every point of horse-flesh, both Eastern and Western, the author writes with apparently inexhaustible knowledge. His literary style is terse, but lively, reflecting like a mirror his own personality, and readily lending itself to picturesque and glowing description. He would appear to have carried about with him, on his mules and camels, a considerable collection of books on many different subjects, and to possess an insatiable thirst for knowledge. A space of two years was allowed to elapse between his return to Europe with the "completed manuscript" and the publication of his volume. During that period, the late Professor Robertson Smith of Cambridge read the proof-sheets, and contributed "a great many valuable corrections and suggestions, not, of course, on matters of opinion, but on points of Semite lore and scholarship." We do not know whether to admire the more this act of generosity in him whose too early death every seat of learning in Europe is still

[4] *Vide* Darwin's "The Descent of Man," vol. i. p. 241.

lamenting, or the sense of need which impelled an Englishman who had resided so long in Eastern countries to seize the earliest opportunity of obtaining further guidance.

Before advancing, it may be convenient to clear the ground by referring somewhat fully to the author's manner of passing abruptly from subject to subject. In this respect his pen resembles the "blood-red bay," of which he tells us that

> "A touch will turn her
> In the hottest of the fray."

He no more thinks of preserving unity than did the Arab rhapsodists of antiquity whose verses we shall presently find him quoting and translating. It would never do for the Western critic to overlook this irregularity; though, in a work so saturated as this with Orientalism, the fault of discursiveness may be leniently treated, provided that the material introduced is not too entirely foreign to the subject proper, and is intrinsically interesting and valuable. In order to enable the reader to apply this test, we shall bring forward in succession three considerable series of extracts.

Of course there is some connection between the horse-supply of a country and the attributes or character of its government and administration. But, even apart from this fact, it was scarcely to be expected that a British officer holding an important post of observation in Asiatic Turkey should write a book at Bagdad, the head-quarters of a great Pashalick, without interspersing references to the Osmanli among his other sketches. The following observations deal with weighty matters:

"Osmanli influences have been unsparingly exercised to weaken the bond which unites these people [*sc.*, the tribes of the deserts between Bagdad and Bussorah]; and in some respects they now are in a somewhat shattered condition.... The approaches to the Arabian littoral in this quarter, though not unguarded by the establishments of the distant central authority at Constantinople, are largely in the keeping of survivals like the Du-laim and the Mun-ta-fik [Arabs], whose vitality it seems impossible to crush. To reach eastern Arabia by the open water-ways, and seize the towns of the seaboard, is an enterprise within the capacity of any foreign power possessing naval superiority. But it is one thing to defeat mercenaries, and a very different thing to be confronted by chieftains who, although destitute of what we should regard as military forces, hold in their hands the resources of important districts, and are possessed of singular ability. When recently enjoying the hospitality of one of the proudest of the Mun-ta-fik patriarchs, we more than ever realized the difficulties which would beset the European commander who should be called upon temporarily to establish his authority, and pass on troops from base to base, in these immense regions. We do not know how many, or how few, staff-officers who are able to speak to the Arabs in their own language, and interpret to others their characteristic traits and sentiments, would be available in such circumstances. But if ever it come to pass that, for want of such assistance, military chiefs are compelled to rely, in their Intelligence and Supply departments, on the legion of Levantines and I'-râ-kis who, on the grounds of their speaking English, or French, and Arabic, will proffer their services, very great difficulties will be experienced."—Pp. 85, 86.

A second topic towards which General Tweedie may well be excused for often turning is, the cavalry arm of the Indian service. The words of a German military writer, "Woe to the nation that neglects its cavalry," have been impressed on his mind by experience, both on the battle-field and on the line of communications. India, he observes, has been united with England, "not by the Englishman alone, but by the Englishman and his horse." Bagdad must form a rare vantage-ground from which to watch the gradual advance of the Muscovite power, through the subjugated Central Asian khanates towards the Roof of the World. A few years ago Russia greatly strengthened her consular establishment in the city of the Caliphs. A Persian employé of the Algiers government lately observed to us, that the Shah's kingdom was now practically Russian, and merely awaited delivery, like a bale of purchased merchandise! The author of the book before us is not, however, an alarmist. He neither fears Russia nor regards the Russians as necessarily our enemies. He seems to think that there is room in Asia for the more or less harmonious expansion of the two rival branches of the Aryan race; and we certainly gather that he would anticipate more satisfactory results from the improvement, on perfectly straightforward lines, of the *entente* between the governments of St. James's and St. Petersburg, than from the policy of throwing machine-guns, English artificers, and Indian money into a quaking "Buffer-State."[5]

But, with all this, General Tweedie seizes every opportunity of urging his countrymen to "keep the powder dry," the drift of this laudable recommendation, from his particular stand-point, being that, even in these days of ironclads and breech-loading rifles, an adequate supply of horses is indispensable to a country's safety; and that India, therefore, is deeply interested in every adjoining region from which efficient remounts are procurable. The reader who would understand the causes of India's present inability to produce on her fertile plains and immense prairies a sufficient number of heavy-cavalry and artillery horses, or even of light-cavalry cattle fit to carry Europeans, has only to turn to General Tweedie's pages. In brief, Hindoostan under the *pax Britannica* has ceased to support nations of martial horsemen; her people do not generally care for the saddle; and horned cattle are used for most kinds of labor. Hence the necessity of importing remounts; and not only remounts, but also stallions for the use of native landholders, in provinces where natural habit or the stimulus of shows and prizes tends to make horse-breeding a branch of rural economy. On the remount question, nothing could be more graphic than General Tweedie's descriptions of the Porte's endeavors to stop the export of horses, and of the successful resistance which its own subjects offer, by every species of wile and chicanery, to those pre-

[5] *Vide* Mr. G. N. Curzon's letter in the *Times* of 8th January, 1895.

ventive measures. The professional horse-exporters of El Irāk are so energetic and so ubiquitous that, in his opinion, our military authorities, were they to send into the same field their own remount agents, would simply raise the prices, and check the supply of horses through the ordinary channels. Having said this, he thus continues:

"The deputing of experts for the purchase of *stud* horses rests on a different basis, as it cannot be said that the regular exporters specially address themselves to this task. If we wished to breed race-horses, whether in India or in any other country, we should use none but the best Newmarket blood on both sides. The improvement of Eastern stocks, so as to bring them up to the mark of military service, is, however, a different matter. . . . The government of India for many years endeavored to procure compact and well-bred Arabians through its political establishment in El I'râk or 'Turkish Arabia;' but the system of ordering 'per indent' a dozen or more horses, all of the same pattern, did not invariably yield satisfactory results; and it is now considered preferable to select, in India, Arabian, or oftener, it may be feared, I'râkî, stallions from the strings of the *jambâzes* [*i.e.*, professional dealers]. A combination of strong points, with a freedom from defects, such as is rarely met with in Eastern countries, is required to make a good stallion of any description; and in purchasing horses which are intended to contribute through their near and remote descendants to the defense of the empire, it is impossible to maintain too high a standard, provided that it is a practical one. The horses suitable for this purpose which we have seen in a decade's residence in Baghdad, might all be tied with one rope. India is not the only foreign country that draws on El I'râk for stud-horses. . . . A few years ago, a Russian cavalry officer riding a weight-carrying and very charger-like Turku-mâ-nî, visited Baghdad on duty of this kind; but he did not see a horse which he reckoned worth buying. If he had been a novice instead of, as the case actually was, an old campaigner, he would have found no difficulty in collecting a boat-load. A decade or two later the proper bureau of the Czar's government would most likely have had occasion to pass an order on reports submitted to it, that 'the Arabian stallion had been tried and found wanting;' the truth perhaps all the time being, that not one of the horses which had been forwarded could claim other than a chance connection with the stock of Ku-hail" [*sc.*, the pure Arabian breed].—Pp. 284, 285.

From recent observation in India, we are able to supplement the foregoing general representation. The military authorities at Simla, when in want of *European* stallions, submit their requirements to her Majesty's Secretary of State in London; whereupon the execution of the order is intrusted to a salaried expert. But no such special purchasing agency, where *stud* horses, that is to say, are concerned, exists in India. There the veterinary officers of the horse-breeding department undertake the duty of buying in India Arabian stallions. Now, on points of build and soundness, the veterinarian is generally a good judge of horses. It is also true that the knowledge of human nature is frequently conjoined with that of horse-flesh. But Eastern men and Eastern horses require to be studied from new view-points. And a veterinary surgeon may be ever so eminent, and yet possess no aptitude for picking stud Arabs, whether from the freshly-landed strings of the dealers or from private collections. And, moreover, nobody can possibly find in India Arab horses of a higher class than those which the

dealers or others may chance to bring over. Thus, on the whole, the conclusion confronts us that the merits of the Arabian blood-horse, as a sire of remounts in India, will not be fully tested and determined until the government of that warm dependency shall devise a method of procuring Arab stallions direct from Arabia, as English stallions are now procured direct from England, through the services of experts. About two years ago, a member of his Excellency the Viceroy's Council, when inspecting a rearing depot of country-bred remounts, requested that ten colts sired by the imported English racer, ten sired by the Norfolk trotter, and ten sired by the Arabian, should be paraded; and the result was that, in the unanimous opinion of the committee present, the prize of superiority, in point of quality, bone, size, and substance, was adjudged to belong to the produce of the Arabian. If such is the state of the case, in spite of the fact that even of the Arabs that come to India the best do not fall to the lot of government, how reasonable is the inference that the opening of a new source of supply, yielding the flower of the desert, would impart an impulse such as has never yet been given to the production of remounts in India. The evil and the good produced by every stallion live after him; and it is better for a backward country to receive one genuine and true-made stud-horse annually than to be liberally supplied with commonplace animals. The present is a good time for offering these suggestions. About a year ago, we believe, the horse-breeding operations of the government of India passed under the superintendence of a fresh officer. Before new or old theories shall have hardened, the question of "trotting-blood" deserves reconsideration. Not only are attempts all at once to increase in bulk and stature small and weedy stocks of horses pretty sure to end in the production of monstrosities, but even supposing such experiments to be defensible, it is idle to think that with hackney sires of true strain fetching up to five thousand guineas in England, India can ever receive anything better than nondescripts which it has pleased some talkative breeder in Cambridgeshire or Norfolk to dignify with the name of "trotters," and the progeny of which, when set to work in a warm climate, will show by many symptoms that they are out of their element.

Irishmen say that their hunters' habit of stopping at water is due to their imagining it to contain whisky! In the same way the author of this book cannot pass a piece of Eastern horse-furniture without pausing to examine it, in search of a hint or a pattern. The saddles and bridles and mounted exercises of the Arabs, Kurds, and Persians are inspected with the critical eye of a cavalry adjutant. A story is brought in of a Turkish commander, who reported with military brevity to his superiors that the Bedouin men were without religion, the Bedouin women without drawers, and the Bedouin mares without bits! This means, as a capital illustration exhibits, that the character-

istic Arab bridle is nothing more than a picturesque halter; but the desert rider, it is added, carries at his saddle-bow a "rusty iron" which he slips into his mare's mouth on special occasions. The Bedouin do not use stirrups; partly because they pride themselves on not requiring a step in mounting, and partly that they may freely roll off, or be knocked off, the mare's back, and jump up again in a moment. The scourer of the desert, despite his loose attire, has so strong a leg-grip that when he rides on foray, he can hold fast a reserve spear between his thigh and the saddle.

The "more than a hundred varieties of bits" which are to be seen in saddle-rooms, and some of which, notably the "Mameluke," appear among town Arabs, are dismissed with the remark that "all but a few of them ought to be sent out of the country for sale to savages," or deposited in a museum. We know of no bit to which this is more applicable than to the cruel and antiquated jointed snaffle combined with the curb bit of our own cavalry; for which it is high time that a plain straight bridoon were substituted, if chargers and troop-horses are ever to be otherwise than sore-mouthed, miserable, and unmanageable. Here are some further words on this subject, and on spurring,—

"The purchaser who takes care to buy only properly-shaped [Arab] colts will find that their faults of action are susceptible of improvement. After he has made his purchase, let him, if he have the necessary leisure, patience, seat, and hands, not begrudge the trouble of teaching that which is to form, perhaps for many years, a part of himself, to play the same tune with all four legs, at the walk, trot, and canter. Above all things, let him be as gentle as he will find his pupil to be. If it be hard on him to have a raw horse under him, it is harder on the horse to be suddenly taken from a nation of light weights, and set to carry perhaps a cavalry major whose riding weight, thanks to a good mess and Indian allowances, exceeds that of two desert Arabs. For the Arabian horse, the 'blessings of civilization' generally consist of over-bitting, over-weighting, and hands of iron. The wonder is, not that the change perplexes him, but that he does not rebel and fall to kicking, or like a horse of which we lately read, lie down in despair."—P. 204.

And again,—

"It is pitiful to see a man who cannot ride, and whose feats are necessarily confined to a beaten track, appear in spurs. If he were going for a walk, it would not matter, for then he would only cut his boots. But it is to be dreaded that, before his return, he will have lacerated his horse, and, if he should chance to tumble off, scored his brand-new saddle. It may be doubted how far it is advisable, even for first-rate riders, to arm their heels, as a mere point of dress, on all occasions. A good horse will do his best without having his sides wounded. When he flinches, either he is not properly asked or he distrusts himself. Nevertheless, the spur has many uses, of which he who understands them certainly ought to avail himself."—P. 195, f.n. 1.

At the present time, when Continental commanders think it so important to test the staying powers of cavalry horses, the following sentences might advantageously be translated in the Kaiser's order-books,—

"Any strong man can override a horse, and in so doing make a record which at first sight shall seem extraordinary. To constitute a true test, it ought to be provided that the horses shall be so selected and so brought to condition, as well as so ridden and cared for during the trial, as that they shall neither suffer misery nor be rendered inefficient. Horsemanship should always be associated with humanity." —P. 198.

Before passing on, we have still to present a third group of extracts illustrating how numerous are the subjects approached by General Tweedie. The discovery in a work like this of theologic, anthropologic, and philologic traces makes us feel at the first blush as Robinson Crusoe did on coming across strange footprints in his island! Seriously, when one who is necessarily not abreast of European research handles subjects like the origin of the Arabs and Hebrews, which cannot be profitably discussed save by specialists, and not even by them off-hand or episodically, he works at a disadvantage. We apply this observation to General Tweedie's sections on the affinities, racial and historic, of the Semite peoples; to his attempts to go beyond the ascertained facts, in respect of the small proportion of Abrahamic tradition and element which really existed in the old idolatry of Mecca; and to some of his philologic material. As touching all these incursions, he was not without misgivings. Thus the *Apologia pro opere suo* which his preface forms, contains the following among other explanations:

"In searching for historical standing-ground, he [the author] encounters questions which have already been considered in Europe by trained investigators, who live beside great libraries, and have made good use of them. And in choosing and shaping the materials which lie more or less before him, he finds it difficult to observe true proportions. . . . It is said that there are people who condemn all books in which they find something different from that which they expect to find. But a very ordinary amount of reflection will be sufficient to show that he who approaches Arabian subjects on Arabian soil, with an adequate command of Arabic, and in sympathy with the Arabs, is likely, even though a European, to gather fresh materials."

Now, the last words of the above extract contain the point of our present remark. If the "fresh materials" had formed contributions to our practical knowledge of Arabia, we should have received them gladly, without inquiring too strictly whether they were essential to the full treatment of the central subject or subjects. The parts of the book which invite these comments are generally bright and interesting. For instance, it is useful to reconsider in the light of modern Biblical criticism the view prevalent in Europe as to the sources of the narratives in Alcoran. And the proposition which is said by General Tweedie "to run like a thin thread through" one of his chapters, that God's chosen people "came originally from that foundry of nations Arabia," touches the pre-eminently interesting problem of whether, as Renan imagined, the solitudes of Arabia produced a monotheistic instinct in the Semite group of nations generally, or, as others conjecture, the ground and influences of Syria developed this tendency in

Israel specially. It is to be regretted that on many of his topics the author imparts so little of what he must have observed and heard among the Bedouin. Such knowledge would have been of first-rate importance if given in all detail, and as far as possible in the very words of his informants. He himself frankly states that modern Bagdad affords but slight facilities for scientific study; that its learned men "are chiefly grammarians, without the power, even in that limited field, of going outside of Arabic into other Semitic tongues; that the cultivation of their several 'orthodoxies' absorbs them; and that their inclination towards secular studies is even slighter than their materials." The case being so, we should have thought that the European Consul-General and scholar, who was situated among "persons who do not see European books, and do not know the English language," would have looked about him for other methods of investigation than the literary. Let us slightly exemplify our meaning. In noticing the distinctive marks with which the Arabs brand their camels, and which are also to be found scratched on stones and buildings near the caravan routes, General Tweedie rightly advises travelers not to despise such traces because of their being "only camel-brands." Why, then, did not he himself bring home copies of as many as possible of these scratchings? Plates of this kind, if accompanied by descriptions of the several spots where the originals existed, would not have been without value. By way of a small mercy, we should have appreciated seeing even the list of "forty-four tribe names and twenty-eight personal names" of the Aeniza Bedouin which, as another chapter mentions, was obtained from the northern desert. Having the roll in question before him, the author thus writes,—

"Not only are all the names in the list purely secular or 'heathen,' but all of them are regularly connected with some Arabic root; the idea wrapped up in which is now an abstract one, now a concrete. Often the name denotes prosperity, or a 'flow' of pastoral wealth. One great Shekh of the Sba', Muhammadu 'l Misrib, is content to borrow the name of the humble utensil (*mis-rib*) in which milk is set out to turn sour! Names denoting some bodily mark or peculiarity, or some trait of character, are common. Equally so are those taken from plants or animals; sometimes from birds or beasts of prey; sometimes from creatures as lowly as the mouse or hedgehog. The important subject of the animal god, or *totem*,—a loan word from the vocabulary of the Ojibway Indians,—here crops up; but notwithstanding much patient inquiry, we can offer no new observations tending to support the view which is held by a good many European literati, that Arab stocks whose names are those of plants or animals anciently believed themselves to be the children of them. The next time that the Royal Welsh Fusiliers garrisons Hong-Kong, there is nothing to prevent a Chinese archæologist from conjecturing that the white goat marching at the head of it is its *totem*. The same savant, without going back to prehistoric ages, or citing American savages, may also find abundant material with which to build up his theory,—from the British lion and American eagle down to the Scandinavian raven. And yet all of us know how far removed from sober fact his speculations would be. If any one were to suggest to Shekh Fahd, the present head of the Ibn Hadh-dhâl division of the Ae-ni-za, that the life of himself and his tribe mysteriously depended on the Lynx (*fahd*) species, he would be as

indignant as the Plantagenets would be if considered under the protection of the broom; or the Clan Chattan, if held spiritually interrelated with the cat. These analogies may be considered faulty, on the ground that cognizances and heraldry are unknown to Bedouin. This may partly be so. . . . The Bedouin charge in whirlwinds; with no marks to distinguish brave from brave, or friend from foe. . . . In a *mêlée*, it is only by their cries that they are distinguishable. Therefore if the Bad-u who has for his name one of the Rose or Lily, Fox or Bullock, category had marked himself accordingly, it would have been but reasonable; and the learned would have had the less occasion to transfer to Semites the bestial deities of the Red Indians."—Pp. 107, 108.

The foregoing representations are better calculated to entertain than instruct the reader. In so far as they relate to the hypothesis that totemism prevailed among the prehistoric Semites, they do not go deep enough. Several prominent scholars have shown, by the proper scientific methods, that the view in question is reasonable and probable. And it is needless for any one to report his inability to obtain corroborative evidence through "patient inquiry" among the modern Arabs; as if any Mulla or any camel-herdsman would favor the suggestion that his forefathers took for deities species of animals or of plants. Far more satisfactory are the numerous references to the Arab religion, as historically known to us, which run through this volume. Not only the Arab horse, but everything that surrounds it, is lovely in this writer's sight. According to his statement, "The three grandest, truest, and most original figures in Semite story, as it appears to many, are Abraham, Solomon, and Muhammad." However this may be, a glance informs us that the secondary hero of this book is the personage who, partly through the exercise of a highly-wrought imagination, and partly through the skillful adaptation of old materials, fabricated a new creed, and called it "the faith of Abraham." Now we have no fault to find with this. General Tweedie is free to choose his heroes; and having chosen Mahomet, to follow the example of Carlyle,—who, by the way, considered himself as, up to date, the last of the prophetic series,—and say all the good that he possibly can of him, as, for example, in the subjoined passage:

"As noble of heart as of lineage, as abounding in brotherly love as in moral force, all that was most elevated in the ancient Arab character came to perfection in him [Mahomet]. Of the censures commonly passed on him, some are shaken when the Kur-ân is studied; and others count for little alongside of the facts of his being first a mere mortal, then a sixth-century Arab. Take, for example, his legislation regarding marriage. Here should be remembered the old-world view, nowhere stronger than in Semites, of the obligation to perpetuate the name and family. From Noah to Muhammad, no patriarch ever dreamt of moral evil in promoting as many expectant maidens as circumstances justified to be mothers of men; provided that no one's domestic peace was broken; no wife or daughter forced (except in war) from her own people; no woman deserted whose hand had once been taken. If the Meccan had realized the 'bone of my bone and flesh of my flesh' ideal, if he had dealt with the idols of the harem as he did with those of the temple, he would have been other than an Arab. A graver accusation is that of

issuing as God's revelations dogmas and precepts of his own shaping and re-shaping. But as to this, only they who have weighed the facts are fair judges. With, *e.g.*, the outbursts of supposed miraculous voices in the church of the excellent Edward Irving in the heart of busy prosaic London before us, extreme allowance is necessary for exaltations of feeling and attendant visions or hallucinations—only too apt to become stereotyped or habitual—in one who, at the mature age of forty, emerged a Prophet from the mountain solitudes over against Mecca, like Amos from the deserts of Judah."—P. 17, f.n.

In juxtaposition with the foregoing extract has to be placed the statement that one of the many unconventional features of this work, as the Preface shows, is its dealing with Mahomet "as far as possible from the Arabian stand-point," which to begin with is necessarily one of admiration. The announcement of this determining limit receives the following amplification:

"When learning revived in the sixteenth century, the great leaders of the Reformation thought and wrote much on the subject of El Islâm; and the theories which they propounded regarding it are not unrepresented in modern literature. . . . Lastly, philosophic Indians have written books on Islamism which are to the Arab religion what 'Robert Elsmere' is to Christianity. The Arabs themselves have not as yet conceived the idea of explaining away their ancient Semitic creed, so that it shall equally suit the believer and the unbeliever; and in the frequent references to their Faith which the general subject of this volume necessitates, the statement of outstanding facts forms the principal object."—P. vii.

As to this, a few remarks are necessary. No educated person, it may be assumed, is blind to the injurious effects produced by Mahometism at once on national, social, and individual life; and it is also sufficiently obvious that the same system of half-truths, from the intensity of its anti-trinitarian character, offers a lamentable barrier to the spread of our own religion. On the other hand, it is now generally admitted that, under Providence, humanity is deeply indebted to the work accomplished by the Arab Reformer. Had General Tweedie throughout his pages kept these two conflicting aspects before him, his representations would no doubt have commanded more general acceptance. Some may even wonder that at this late date, when every scholar, both Western and Eastern, is occupied with Islamism as one of the "three universal religions," any European should concern himself with the lineaments presented by it at the time and in the country of its birth. This, however, is a matter of opinion. For our part, we consider that all Englishmen whose duties lie in Mahometan lands are laid under a permanent obligation by the vivid pictures of the great Arab theocracy, "from the Arabian stand-point," which this remarkable book exhibits.

With this verdict we feel bound, however, to couple the remark that while never taking anything for granted about Arab horses, General Tweedie occasionally allows too much influence to his own prepossessions when treating of Arab men and Arab manners. For

instance, it is quite fair to say of Mahomet that he "must be regarded as the founder of the greatest total-abstinence league in history;" but it is rash to write as if a rule laid down for primitive Arabs, whose condition resembled that of children, must necessarily be good for people living at high pressure. In the same way, the fact that the Bedouin, in whom Mahometism if far from generally disseminated, evince a natural and traditional repugnance to arrack is worth recording; but the suggestion offered that this trait brings out the connection between the nomadic nations of Arabia and the sons of Rechab mentioned in Jer. xxxv., to be of any value, would require fuller treatment. "Maga," praise be to God! in the whole course of an unusually protracted existence, has never experienced the smallest necessity for taking the pledge, even temporarily. And while not denying that excess in strong drink, from Noah downward, has formed the true curse of mankind, we do not think that any European writer is justified in forgetting the incalculable benefits which the moderate and rational use of alcoholized beverages produces in nations far in advance of the Arabs, by whipping up the centres of mental energy and vivacity, and, even more perhaps, by dissolving the inhuman element in human nature. There is only one other of General Tweedie's references to Mahometism which can be noticed, and that is, his clear explanation that the Arab's devotion to horses does not, as is commonly supposed, originate in his creed. The horsemen, *par excellence*, of Arabia, as was just now hinted, are not religious, except where Islamism reaches them through the Turks or the Wahàbis. Mahomet, as a founder of a militant faith, perceived the value of cavalry, inculcated in Alcoran the employment of this arm, and freely descanted on the beauty and utility of horses generally. This, of course, powerfully impresses the minds of the "Faithful;" but history discloses that the Arabs were "horsemen and sons of horsemen" long before their Prophet was born. As supplying further evidence on this point, while also proving that more than fifteen hundred years ago the Bedouin nations prided themselves on their breeds of coursers, the following translated fragment of the ancient Arabian poetry is quoted:

> "And on morn of raid and mêlée,
> Comrades true, the mares we rear;
> Never lost we yet a filly,
> But a rescuer was near.
> Like an heirloom long descended,
> In our tents their lineage runs;
> And when time for us is ended,
> We shall leave it to our sons."
>
> A'MR.

Translations like the above, though seldom given in metre, are frequent throughout the volume. Never before, we should imagine,

has so much erudition, with such a wealth of quotation, been dedicated to the service of horses. The poetic effusions of the pre-Islamic Arabs, which were recited long before they were written, are used as a mine of illustrative material. After giving the names of "THE SEVEN" pre-eminent "makers" of this literature, which, it is stated, "sets us down in the midst of the old life of Arabia, much as Burns's poems do in the kirks and farm-houses of western Scotland, a century ago," the author continues:

"It is impossible for any one who has sojourned in the Arabian desert to read these heirlooms of antiquity without feeling their fascinations. . . . To say that they reflect the desert and its inhabitants, as a lake does the heavens, is inadequate. Their authors made history before they made verses. Warriors and hunters, passionate lovers and knight-errants, seem to speak to us. Picture follows picture, like the movements of the mirage. In one line it is the scud of the wild-ass or the ostrich which we see before us; in the next, a train of tent-ladies in their camel-litters."—Index I., art. Al Mu-a'l-la-kât.

The words just cited are not in the main body of the book, but in an outwork consisting of a "Glossarial Index and Supplement,"—itself a *magnum opus*,—which richly merits mention. At least three separate strands are interwoven in this composition. One of the three is made up of references to Mahometism. The nature of the other two strands will appear from the following explanation, given in the prefatory note to the Index:

"According to our experience, those who, as travelers or otherwise, are interested in Asiatic Turkey and Arabia, do not soon tire of fresh notes on the topography of those countries. It also appears probable that the general reader, when he encounters references to Oriental worthies of antiquity, such as El Asma'-I and Abû 'l Fi-dâ, will gladly find at the end of the volume slight notices of those people."

Certainly; and would that so sound a principle were more commonly acted on in books on Oriental subjects! The philologic materials already casually remarked on, which find their chief repository in this "Index," are thus accounted for in the same "Note:"

"In regard to the attempts which are made to interpret Semitic names, we are conscious that such explanations demand a fuller conversance than ours with linguistic science. In Arabic, as in every other language, there are countless words the first meanings of which cannot be discovered. The Arabic lexicographers did not know the origins of very many of the terms which they collected; and the etymologies given in Lane's great Arabic-English dictionary are wholly Eastern in character. As for the Bedouin, they are still too hard pressed in the struggle for existence to bestow much thought on the names which are handed down among them. If the reader ask why, in the face of such difficulties, etymological material is admitted into the Index, good reasons are not wanting. In the first place, it cannot be altogether uninteresting to notice, even approximately, the lines which, from prehistoric times, the Arabs of the desert have followed in bestowing names on their national or tribal subdivisions, and on their breeds of horses and camels. And, secondly, some of the European travelers who pass our way exhibit a kind of in-

stinctive tendency to investigate the meanings of proper names. As the result in part of their researches, a plentiful crop of 'popular etymologies' has arisen; and the word-meanings which are offered in this Index, however open to correction, are at least improvements on those that are arrived at through a process of guessing."

The modesty of these words disarms criticism, and it is at least evident that General Tweedie has risen above the level of those who attempt to study a language without reference to any other language. Speaking of his "Glossarial Index" as a whole, it is a great storehouse of useful information on Asiatic topics, and we have found it withal very pleasant reading. To mention only one of its articles,—that on the Sunnite and Shi-ite controversy,—even they who are more or less familiar with this subject may chance here to light on new facts about the party and sect of Ali.

Here we conclude the series of extracts produced, as will be remembered, for the purpose of showing that, by however numerous paths proceeding, General Tweedie keeps constantly marching on one object,—namely, the extension of knowledge equally with regard to Arab lands, Arab men, and Arab horses. In the limited space remaining, we shall use as far as possible the words of the book itself, instead of making formal extracts; and, indeed, all the most striking passages have already been reprinted at full length by our contemporaries.[6]

The old and worn-out division of Arabia into "Arabia Felix," "Arabia Petræa," and "Arabia Deserta" is not worth retaining. Arabia, strictly defined, is that great peninsula which, if a line be drawn from the head of the Persian Gulf to the Isthmus of Suez, will lie to the south of it. This is "Arabia Proper," or "Peninsular Arabia." At a very early period it was called "El Yemen," or the Right-land,—the word afterwards mistranslated "Felix." Practically, the name Yemen is now restricted to the southwestern parts, in which is Aden. Another port of the same province is Mocha, which place, however, does not yield coffee. The country surrounding Mocha is sterile, and "Mocha coffee" only grows in shop-windows, the term having originated in the days when Mocha enjoyed a short-lived prosperity as a place of export. A true part of Arabia is that which passes out of the peninsula to touch the Syrian plateau, and which is called by the Arabs "Shāmeeya;" that is, not "Esh Shām," or Left-land, meaning the North (name for Syria as distinguished from "El Yemen"), but "the country *tending northward*." Shāmeeya—the "Arabia" which St. Paul entered from Damascus—is of course Turkish territory, although occupied and commanded by the multitudinous hordes of the Aeniza nation, whose tent cities uprise and vanish in its otherwise untenanted spaces. These Aeniza Bedouin are very great breeders of blood-horses, and are always pleased to receive European visitors. Their country lies between the Euphrates and Palestine.

[6] *E.g.*, *Edinburgh Review*, July, 1894, pp. 198–210.

On the opposite or eastern side of the same river, in the same latitude, are spread out the steppe-lands of Al Jazeera, literally, "The Cut-off," —*i.e.*, Island or Peninsula. Here the martial clans of the Shammar lord it, and pasture vast herds of camels. Perpetual tribal warfare goes on between the Aeniza and the Shammar. Continuous, on the south, with Al Jazeera, but considerably more expanded, El Irāk extends to the shores of the Persian Gulf. This province, in part the ancient Babylonia, lies on the Tigris, as Egypt does on the Nile; and the Euphrates and another considerable river also traverse it. With the exception of Shāmeeya, none of the lands now enumerated are to be included with the Peninsula in the designation Arabia. At the same time, even their settled populations are largely Arab; while overflows, or exoduses of the true nomadic races of Arabia proper have during many centuries passed into them. El Irāk contributes more than its own share of the horses which appear in the Bombay market. The "Irāki" horse is too often the veriest commoner, especially when town-bred; but as his breeders are to some extent Arabs, and as the best Arab blood may be used in his production, it must not be said too sweepingly that he is not an Arab. The way to find a genuine desert courser is, not to confine the search to certain places or people, but to acquire, through study and experience, the power of distinguishing, in all situations and all circumstances, between the true and the spurious. It is not the real Arab horses that are scarce, but the real judges of them. The country of the Scots, we all know, reaches far south of the Tweed, and indeed across many a sea and continent. And similarly the land of the Arabian horse might be considered as including Egypt and large parts of Africa, if not even India and Australasia. But for the purposes of a single book a smaller surface was requisite; and accordingly, in the present study, the lines laid down are at once extended and restricted to all the localities situated in Western Asia, and occupied in whole or part by Semites, over which it may be said of Arab horses, when occurring, that they are at least among their own people, if not always precisely on their native soil. The map accompanying the volume follows this view. Many good maps of Arabia proper exist. The portions of Arabia falling outside of the peninsula appear in maps of Asiatic Turkey. But this is the only map—short of maps of Asia—in which the country of the above definition is shown *en bloc*. The traveler, and especially the military student, will appreciate a chart in which, while overcrowding is avoided, much special information is presented, notably as to the pasture-grounds of the different nomadic nations.

Many readers at the mention of the Arab desert conjure up regions of unmitigated barrenness, wherein the ribbed sand bears no traces of animal or vegetable life. Arabia contains many such spaces; but generally we may be safely guided here by the etymological meaning of

*terra deserta*, or territory devoid of settled inhabitants. Except in certain extreme parts, the Arabian desert is not worse off nor sterner than much of the American prairie land, Australian "bush," and Indian "jungle." Acacias, euphorbias, cactuses, myrrhs, tamarisks, with other shrubs as frugal of water as the camels whose favorite food they form, soften its harder parts. In good years, and at the proper seasons, vast surfaces, owing nothing to man and all to nature, yield luxuriant pasture. Nevertheless, looking at Arabia as a whole, nobody but an Eastern poet would style it fertile. Nothing like a third of its surface is cultivable without irrigation. It is in conflict with all known facts to put forward the suggestion that such a country produced the wild horse; and there is not the faintest indication or tradition that even what are called "feral" horses—in New South Wales and Queensland colloquially known as "brumbies"—have ever supported life in it. A century ago Burckhardt wrote in his "Journal" that "it is a general but erroneous opinion that Arabia is very rich in horses;" and he might have made the same observation if he had lived and traveled now. The renown of Arabia as a "mother of horses" depends on her nomadic nations. At the dawn of history these mustered strongest, as they do still, in the centre of the peninsula, out of which they have never ceased to swarm. The heart of Arabia is Nejed, meaning highlands or plateau. This, undoubtedly, must be regarded as the very home of homes of the far-famed steed of Araby. Nejed, though pierced and traversed by vast *Nefood*, or gulfs of sandy desert not unmingled with oases, is a well-developed territory. Its cities may be unknown even by name to most European readers, but they are none the less busy hives of industry and commerce. If sanguinary battles and sieges serve to distinguish places, then should Nejed be famed in story. Of the seven provinces into which it is divided, all support a more or less martial and high-spirited population. The land, as a whole, and in spite of great changes, still forms what it did when the first glimmer of tradition falls on it, the heart of Arabian nationality and autonomy,—the most Arab portion of Arabia. The tribal offshoot settled on the Tigris or Euphrates values itself, and is valued by others, according to its claims to Nejdean origin. The family domiciled for a generation in a Syrian or a Levantine city, if it would find or make for itself an Arab pedigree, goes to Nejed for it. But most of all the Bedawee, wherever he may wander, holds in reverence the grassy limestone uplands of Central Arabia. The mischief is that, unlike Shāmeeya, Nejed cannot be visited by Europeans without great difficulty. The Arab says, "*He who enters Nejed does not come out again.*" For one thing, the physical barriers of shifting sand and want of water are most formidable. The people also have suffered so severely from the Turks and Egyptians that they are inclined to be suspicious and exclusive. And, moreover, the great Wahabite movement of the last cen-

tury, the object of which was to make Nejed the centre of an ideal and intensely intolerant empire of Islām, still retains some measure of vitality in the country of its birth. An admirable account of the half-religious, half-military despotism which the preacher Abdool Wahāb initiated is given in this volume; but we cannot pause before it further than to mention that during the wars which the Turks and Egyptians were forced to wage on the Nejdean sectaries, large numbers of the best mares and stallions of the desert were taken by Pashas and sold to Europeans. The comparatively tabooed condition of Nejed lent some slight color to Palgrave's representation, that "no commercial export of Nejdee horses has ever been established; and whoever professes to sell, or boasts of having bought one may be unhesitatingly set down as either deceived or deceiving." We know better now. Not only do all the facts refute the statement that Arabia contains colts superior to those which she distributes, but they go further. They show that every desert of which we have any knowledge is so extensively stripped of its best blood-horses, that not many likely colts of from three to five years old remain in the hands of their breeders. As all the Bedouin are mare-riders, what else can they do with their colts than sell them, especially as they have no grooms, and are often brought to the lowest point of drought and famine. No one can approach Nejed without perceiving that there, as generally, the force of trade acts like a colossal pump, and that its horse-stock is constantly passing out of it. Bombay is the best and greatest market in the world for Arab horses. During several months of every year the draught of a vast drag-net, which has been cast more or less over all the country of the Arabian horse, discharges itself into India, and there is not a colt in Arabia which may not one day be seen at Byculla. It is true, however, that some ground exists for the impression that the Bedawee will not sell his mare. In the Arabian literature it seems always to be assumed that apart from the foray, there is but one way of acquiring a filly which is the property of a stranger, and that is by stealing her. It is impossible to find room for references to Turf topics, replete as this book is with excellent practical advice on the buying of Arabs with which to play the great game in India. But the following description of a dead heat run off in the desert under conditions unknown at Weatherby's, though brought in as an illustration of the manner in which a mare may be stolen, may equally pass for a piece of racing literature.

"A respectable person relates that one day he saw a man of the Agel, on whose back were marks like those of cupping, and asked for an explanation of them, and received this answer,—

"'. . . I loved a fair cousin, and sought her in marriage, and her kindred said, "We will not give her to thee unless thou makest *Sha-ba-ka* the wedding-gift." And Sha-ba-ka was a mare, the fleetest of all, and she belonged to one of the Ba-nû Bakr. And on that I married my cousin. And I went out to effect by stratagem

the taking of the mare from her owner. . . . In the guise of a camel-butcher I visited the tribe in which the mare was, and kept going in among them till I learned to distinguish her place from the tent in which her master was. And I saw that she had a filly. And I contrived to enter the tent and conceal myself under a heap of wool carded for washing. And when night came, and the master of the tent appeared, and his wife had dressed supper for him, and they both began to eat, and the gloom had deepened, and they had no lamp, and I was hungry, I put out my hand and stretched it towards the platter, and ate with them. And the man became conscious of my hand, and did not know what it was, and he gripped it; and I laid hold of the woman's hand with my other hand, and she said to him, "What do you want with my hand?" And he supposed the case to be that he was holding his wife's hand, and let go my hand, and I released the woman's hand, and we ate. . . . And the meal came to an end; and the man stretched himself on his back and slept. And while he slept I watched them, and the mare was shackled beside the tent, and her filly was unshackled in the tent, and the key of the mare's fetter was under the woman's head. After a little time a black slave arrived and threw a small pebble. And the woman awoke and rose to him, and left the key in its place, and went out of the tent to the back of it, and I crept and took the key, and unlocked with it the mare's shackles. And I had a hair bridle with me, and I bridled the mare and mounted her, and went off on her from the tent. And the woman came back and entered the tent. Then she called out, and the tribe caught the alarm and became aware of me, and mounted in pursuit. And I put the mare to her speed, with a troop of them after me. And I entered on the time of morning, and did not see save one horseman armed with a lance, and he overtook me, and the sun had risen, and the man began to thrust at me, and could not get his spear-point any nearer to me than sufficed to make these traces on my back. Neither did his mare come up to me, so that he might have me in his power, nor did my mare carry me away, so that the spear should not touch me. And we came to a stream, and I shouted to the mare, and she jumped it; and the horseman shouted to his mare, and she did not jump. And when I saw that she could not cross, I got off my mare to rest myself and her. And the man called to me, and I said, "What is it?" and he answered, "I am the owner of the mare that is under thee, and this is her filly, and as you have got her, take care of her; and truly, by God, I never asked anything of her without attaining to it; and she was like a fisherman's net (*shabaka*) in the matter of taking." '"—Translated from the Arab tale-book, "Naf-ha-tu 'l Yemen," *c.* 1750.

To confound, or even compare, the Bedouin commonwealths with robbers would be to take up a wrong position; but just as little can these people be called honest fellows. To drive a prey is their vocation. It is not a simple matter to determine what, if any, share mere sentiment or affection has in hardening the bond of union between the desert pricker and the mare whose "back is the seat of riches." He who desires to purchase can but experiment on each separate case with a heap of gold or a string of camels. In the life of the Badawee, many a one will want for milk and wool and mutton, sooner than he whose mare is always saddled. The owner of a Derby-winner, and first favorite for the great St. Leger, does not cast so broad a shadow as he does on the superiority of whose mare the safety of the flocks and herds depends. For her sake he may be asked to marry an orphan's ten-score camels, as in other countries one may marry lands and houses. If he rear a colt from her, he is everywhere received

with consideration for the sake of the horse's stud-services; and his kindred will not, if they can help it, let him leave them. There is, therefore, nothing incredible in the tales that are current, not only in towns but in the desert, of very large offers having occasionally failed to tempt a Bedawee to transfer his mare to a stranger. The truth is, that it all depends on circumstances. The mare that it is impossible to buy to-day may after a longer or shorter time prove open to an offer; and it is certain that mares of the highest quality and reputation have been sold to Europeans by the Bedouin. Just as many of the names of the desert folk depict their lives and qualities, so do the names of their mares, like "Shabaka" in the foregoing story, bring vividly before us the raiding habit. The Arabs generally, it may here be mentioned, do not bestow men's or women's names on the lower animals. If they had their sporting newspapers, the reader would be spared such items as that some famous living preacher, or other personage, had "turned a roarer," or undergone some other alteration.

To apply to the Arabian breed the epithet *natural*, as opposed to *artificial*, is unscientific and misleading. In no other breed of horses is the process of mating more effectually controlled and guarded by man than in that of Nejed, which Lieutenant-Colonel Ham. Smith was right in describing as "one of great admixture." An illustration of this fact is afforded by the diversity of colors which even the best bred strains exhibit. The dun color is most uncommon. Piebalds and the like are scarcely ever seen. Black Arabians or else very dark brown —"Voltigeur's color"—sometimes occur; but the sooty shades of black are outside the pale. From ancient times, the dark-red bay (ku-mait), like the black-red hue of the ripe date, is the Arab's delight. Perhaps the prevailing colors in horses of the first blood are the grays. But nobody can pretend to say of any shade of gray, bay, or chestnut that it is more "typical" than another. At an early time the Bedouin must gradually have developed and established their strains of horses out of the equine materials round them in accordance with the sure decree, "*Boni et fortes bonis et fortibus creantur.*" If special and exclusive breeding directed to a certain object explain our English race-horse, there is no need to go further for the secret of the Arab's foray mare. Almost from time immemorial, it has formed a part of the desert system that a mare of renown may add a new strain, called by her name, to the lines of horse-flesh already established. If the pairing of superior animals in successive generations has made the Bedouin breed of horses, a favorable result has been promoted by the circumstance that, instead of having many points to aim at, the Bedawee's one idea is *Al Ghazu*, or The Razzia. He firmly believes that a mare which is not *aseel* cannot take care of her rider when spear-blades are shimmering on the horizon. It may be assumed that he is right in thus judging. If experience had not taught him that purity of blood

was an essential qualification, he would not have been so careful to produce it and maintain it. What gives the Arabian his speed, length of stride, and staying power? Whence the game-cock throttle, flat well-laid muscular shoulder, straight-dropped hind-leg, with great thighs and hocks, powerful ligaments, symmetrical back, and admirable length in proportion between the elbow and stifle-joints? BREEDING, we all know, is the answer. The technical term "thoroughbred" has a perfectly definite meaning. As applied to our English race-horse, it denotes an animal the pedigree of which is traceable, without break or flaw, to certain approved and *recorded* progenitors. The word "recorded" raises, however, a question. It is an evident fact that the Bedouin, while wholly illiterate, possess a considerable power of orally handing down pedigrees. But when it is assumed that strains can be preserved as strictly and perfectly by Arabs who keep no registers, as by European stud-masters who record every act of mating and foaling, a point of divergence is arrived at. "In all the world," writes General Tweedie, "there is no more proper subject for wholesome skepticism than Arab genealogy, both of men and horses." The soundness of this limitation can be proved by conclusive evidence; and the reader who would see it applied critically to *The Five* ("*Al Khamsa*") secondary branches of the great central stock of "*Al Kuhailān*," or the dark-skinned, to one or other of which "*Five*" the Bedouin traditionally reckon all their countless strains and sub-strains of the genuine lineage, must needs address himself to the volume before us. The analysis in question is masterly and searching. It goes to the root of the science and art of horse-breeding, and should be studied by all who are engaged in the production of pedigree animals generally. The conclusions arrived at, where Arab horses are concerned, will appear from the following pithy sentences: "Given certain outward signs and points of conformation, and provided that we can have the animal, any tribe may claim the pedigree;" and again, "He who would buy a horse and not a name . . . should, before attaching too much value to a desert stud term, wait till the bearer of it shall have given proof of superiority."

It is necessary here to take leave of this seductive book. There are whole sections of it which we have been forced to leave untouched, notably descriptions fraught with interest of the physical characters of Arabia as tending to produce the refined type expressed by the word "quality," at once in human beings, in tent-bred animals, and in the wild creatures of the desert. We should also have liked to notice the pictorial illustrations, which, if not all on the same artistic level, are all alike truthful and instructive. Regarded as a whole, the book is rich in suggestion for scholars, ethnologists, and theologians, and the style and treatment are not unworthy of the vast stores of knowledge and experience possessed by General Tweedie.

## ORIGIN AND DEVELOPMENTS OF STEAM NAVIGATION.

(Continued from page 266.)

*1863.*—THE NATIONAL STEAMSHIP COMPANY.—The year in which this line, between Boston, New York, and Liverpool, was started was a most unpromising one for the inauguration of such a commercial enterprise, as it was the year in which commercial men in the Northern States were distracted with apprehensions for the future of the Union, and when trade, except in war material, was practically at a stand-still. Such was the period, however, chosen by a little knot of far-seeing commercial men in Liverpool for commencing the operations of the National Steamship Company. They have been more than justified by the result, and their success is at once a testimony to their pluck and commercial foresight.

The National Steamship Company was the first and for some years the only steamship company trading across the Atlantic between Liverpool and the United States established upon the principle of a limited activity, that is, to maintain the reputation of its steamers for safety and such expedition on the voyage as is consistent with safe navigation. And as an additional guarantee for safety, the company takes upon itself the entire insurance of each of its steamers, and a considerable sum per annum is distributed between the captain and officers of each steamer, as a bonus, provided that their vessel is navigated free of accident. The efficacy of these regulations is proved by the fact that, although the National Line has carried nearly 650,000 passengers, not a single passenger has been lost from accident of the seas, and though it was started with a capital of £700,000, in one of its recent years its gross earnings exceeded that amount, and it has not only paid good dividends during the years of its existence, but has accumulated an insurance fund of over £200,000, while its property in 1877 was valued at £1,200,000, and must now have increased to more than double the original capital. From the start the directors had to face the fact that it could expect no assistance from mail subsidies, and that it had to compete with formidable rivals. It was necessary, therefore, that it should strike out a line for itself, and it was decided that the line should consist of ships not built for great speed, but capable of carry-

ing large cargoes without interfering with comfortable arrangements for passengers. This was the model adopted, and experience has shown that the policy of the company was a wise one. The result is that to-day the vessels of the National Company are among the largest engaged in the transatlantic traffic.

The company commenced its operations in 1863 with three of the largest vessels then afloat, viz., the iron screw steamships "Louisiana," "Virginia," and "Pennsylvania" respectively, of a gross tonnage, one of 3000 and two of 3500 tons each. The following year the fleet was increased to six vessels by the addition of the "Erin" the "Queen," and the "Helvetia," each of a larger tonnage than the pioneer vessels, with which number a weekly service was commenced. After two years' trading this fleet proved insufficient, and two other vessels—the "England," of 4900 tons and 600 horse-power, and the "Denmark," of 3724 tons and 350 horse-power—was added to the line in 1865. In 1868 the "Italy," of 4169 tons and 500 horse-power, built and engined by Messrs. John Elder, of Glasgow, became one of the National liners. It should be mentioned that the "Italy" *was the first Atlantic steamship in which engines upon the compound principle were used.* In 1869 the "Holland," of 3847 tons and 350 horse-power, was added to the line. The company signalized its increasing prosperity in the year 1871 by adding to the line two of the largest steamships then afloat (the "Great Eastern" excepted) in the "Egypt," of 4670 tons, and the "Spain," of 4512 tons. The "Egypt" is 455 feet long and 44 feet beam, and the "Spain" 440 feet long and 43 feet beam. Each of these vessels has frequently made the passage from Queenstown to Sandy Hook in nine days. In 1872 the "Canada," of 4276 tons, and the "Greece," of 4310 tons, were added to the line. At the present time (1882) its fleet consists of the following vessels:

| Name. | Built. | H. P. | Tons. | Name. | Built. | H. P. | Tons. |
|---|---|---|---|---|---|---|---|
| Spain | 1871 | 600 | 4871 | Canada | 1872 | 450 | 4276 |
| Egypt | 1871 | 600 | 5089 | Greece | 1872 | 450 | 4310 |
| England | 1865 | 600 | 4900 | France | 1866 | 450 | 4281 |
| The Queen | 1864 | 450 | 4471 | Holland | 1869 | 350 | 3847 |
| Helvetia | 1864 | 500 | 4588 | Denmark | 1865 | 350 | 3724 |
| Erin | 1864 | 500 | 4577 | Italy | 1868 | 500 | 4341 |

Comprising twelve of the largest steamers (belonging to one company) in the Atlantic passenger service, capable of accommodating 1200 cabin and 15,000 steerage passengers. With this fleet a weekly service is maintained, one vessel starting from Liverpool every Wednesday and another for New York every Saturday. In addition there is a special weekly service maintained between London and New York, in which six vessels of the company are engaged.

At the outbreak of the Abyssinian campaign the "England" and

the "Queen" were chartered by the government as transports, and continued in service until the close of the campaign. They made the shortest run of any of the transports between Liverpool and Bombay, and the "Queen" steamed home from Bombay to Liverpool, by way of the Cape of Good Hope, in forty-nine days, which was claimed as the shortest time ever made by that route.

Four of the company's steamships—the "Egypt," the "Spain," the "England," and the "France"—were engaged in the year 1879 to convey troops to South Africa, and the present year the "Holland," the "France," the "Italy," and the "Greece" were employed to take troops to Egypt. The "Holland" sailed from London on the 1st of August with a portion of the Household cavalry, and by special request of Her Majesty passed inside the Isle of Wight, and she was visited by the Prince and Princess of Wales and their daughters, who boarded her from the Royal yacht "Osborne."

On the 9th the "Greece," commanded by Captain W. Pearce, sailed from Southampton, having had the honor of receiving four royal visits during the day. She had on board 246 horses and about 300 officers and men of the Fifth Dragoon Guards, under the command of Lieutenant-Colonel Pope. The first distinguished visitor to arrive on board the steamer was Prince Edward of Saxe-Weimar, who, with his suite, made a careful inspection of the vessel and the arrangements for the accommodation of the troops, and expressed themselves highly satisfied. Shortly afterwards his Royal Highness the Duke of Cambridge and suite paid a visit to the "Greece," and after a thoroughly official examination of the provision made for the officers, men, and horses, expressed the greatest satisfaction. About three o'clock in the afternoon the Prince and Princess of Wales, accompanied by the three princesses, Louise, Victoria, and Maud, and the two royal middies, Prince Albert Victor and Prince George of Wales (just returned from their two years' cruise round the world), and Miss Knollys, went on board the "Greece," inspecting with much interest every portion of the fine vessel, their examination even extending to the lower decks of the vessel, where the horses are carried. The Princess of Wales was most particular in examining minutely all the fitting and accommodation for the men and horses, and was especially enthusiastic in her commendation of the arrangements of the vessel. Immediately after their departure the royal yacht "Alberta" was sighted, and Her Majesty the queen, arriving from Osborne House, accompanied by the Princess Beatrice, the Duchess of Connaught, and attended by several ladies, was received on board the "Greece" by Admiral Ryder and Captain Brookes. The queen, who evinced the liveliest interest in the fitting out of the transport, was much pleased with her visit, and before Her Majesty left the steamer, several officers who were going on active service in the East were presented to her in the saloon.

The steamships of this line have been constructed by the most celebrated builders in Great Britain, and are of great strength and power and of beautiful model, enabling them to make regular passages in all kinds of weather. They are built entirely of iron and steel (except the merely decorative parts), and divided into water-tight and fire-proof compartments, with steam pumping, hoisting, and steering-gear, and provided with fire-extinguishers, improved sounding apparatus, and generally found throughout in everything calculated to add to their safety, and to the comfort and convenience of passengers, heretofore unattained at sea.

The saloons are some of them one hundred and fifty feet in length, and are particularly well lighted and ventilated. The state-rooms, all on the main-deck, are exceptionally large, light, and airy, and are furnished throughout with every requisite to make the ocean passage a comfortable and easy one. Pianos, ladies' saloons, both on deck and below, gentlemen's smoking-room, and ladies' and gentlemen's bath-rooms, are provided. The *cuisine* is of the very highest order.

Special attention has been given in the construction of the steamers to provide for the comfort of steerage passengers, the accommodation being unsurpassed for airiness and room, light, good ventilation, and general arrangements.

The steamers have covered-in decks over their whole length, allowing passengers in good weather an unobstructed length of promenade, and affording in bad weather a complete protection from wet and exposure, while allowing spacious room for exercise. The deck space is over four hundred feet in length, and from forty-two to forty-five feet wide.

The sleeping apartments are well lighted, warmed, and comfortable, the height between decks being greater than in most steamers. Married couples, with their young children, are berthed by themselves; single men and women in separate rooms, apart from each other. During the day all can associate together and mess at the same table. Stewardesses are in attendance on women and children. Medicine and medical attendance free to every passenger.

From the beginning of its operations it has been the settled practice of the company to make the safety of the passengers its first consideration, and the speed of the passage the second. It is the uniform practice of the managers to require from each captain a sailing chart, showing his course out and home, the instructions being that he is never to go higher than a certain line of latitude with the idea of getting a shorter sailing line. These charts are regularly examined and filed. The articles in the Company's Book of Instructions on these matters are as follows: "During the ice months, that is to say, from the 1st of February until the 31st of August, inclusive, the commanders will shape their courses so far south as will in their judgments avoid danger from

field icebergs. Between the above dates they are not to cross the region of the banks higher than 43° north latitude on the outward passages (easterly), and not higher than 42° north latitude on the homeward (westerly) passages. From the 1st of September until the 31st of January, inclusive, the banks are to be crossed at a safe distance south of the Virgin Rocks.

"The commanders, while using every diligence to secure a speedy voyage, are prohibited from running any risk whatever that might result in accident to their ships. They must ever bear in mind that the safety of the ships and the lives and property on board is to be the ruling principle that shall govern them in the navigation of their ships, and no supposed gain in expedition or saving of time on the voyage is to be purchased at the risk of accidents. The company desires to establish and maintain the reputation of the steamers for safety, and expect such expedition on their voyage as is consistent with safe navigation."

From the soundness of the positions it has taken and the policy it has pursued, it is not too much to prophesy from its past an equally prosperous future.

*1866.*—THE WILLIAMS & GUION LINE.—This line was established in August, 1866. It was originally the Black Star Line of packet-ships, which were run from Liverpool to New York for twenty-four years, carrying some sixty thousand passengers yearly, and never losing a ship or a life by accident. From 1866, when the steamship line was established, to 1873 the line run six steamers, each making eight round trips per year, carrying, on an average, six hundred passengers to New York and one hundred from New York each trip, making seven hundred passengers per round trip, or a total per year of thirty-three thousand six hundred, and a grand total of passengers, between 1866 and 1873, of fully two hundred and fifty thousand. In January, 1868, the "Chicago," of this line, ran ashore near Queenstown and became a total wreck, all hands being saved. Since then the "Colorado" was run into in the Mersey, and six passengers jumped overboard and were drowned. All the others were saved.

In August, 1866, the iron screw steamer "Manhattan" sailed from Liverpool for New York, being the pioneer of the company's new fleet. The "Minnesota," "Nebraska," "Colorado," "Idaho," "Nevada," "Wisconsin," and "Wyoming," named for the States and Territories of the Union, each of about three thousand tons, and built of iron specially for the line, followed in rapid succession. In 1873 the "Montana," of three thousand five hundred tons, was added, and in 1874 the "Dakota," a sister ship. The incorporate name of the company is the "Liverpool and Great Western Steamship Company," but it is best known as the "Guion Line."

The "Alaska," the latest addition to the Guion Line, arrived in

New York on her first trip after a prolonged and stormy passage, having left Queenstown Tuesday, November 1, during a severe storm, which during the night turned into a complete hurricane. The steam steering-gear gave way, as also did the hand-gear, which compelled a stop for ten hours to repair the damage. The next day a small steam-pipe broke, which filled the engine-room with steam and obliged the engineers to leave their posts and put out the fires. It was only a water-pipe used to lessen the noise of escaping steam, but it caused great inconvenience and obliged them to work up to sixty-five pounds of steam only, when the vessel is capable of working under one hundred. An average of sixteen knots an hour was made, but it is expected the "Alaska" will make regularly eighteen and one-half knots an hour and record four hundred and forty miles a day. She made four hundred and two miles one day with only sixty-five pounds of steam.

Mr. Guion, accompanied by a number of personal friends and members of the press, went down the bay in a special tender to meet the steamship. When the tender was off Staten Island the huge ship was sighted steaming through the Narrows decked gayly with flags, floating the national ensign at the fore and the flag of the royal naval reserve at the stern. When off quarantine the "Alaska" dropped her anchor, and the health-officer, with those who had gone down to inspect her, went on board.

As the vessel lay at anchor in the stream she presented a fine appearance, but only when on board of her could one get an idea of her size. The principal dimensions of the "Alaska" are: Length, 526 feet; breadth, 50 feet 6 inches; depth, 40 feet 7 inches to upper-deck, or 48 feet 7 inches to promenade-deck. Her gross tonnage is 8000 tons. The engines are of the compound inverted, direct-acting, three-cylinder type, the high-pressure cylinder 68-inch diameter, and the two-ton pressure cylinders 100 inches diameter each, with a stroke of 6 feet. Steam is supplied by boilers of the usual cylindrical form at a pressure of 100 pounds. The indicated horse-power is about 1000.

The "Alaska" has two smoke-stacks and four masts, bark-rigged. There are altogether seven decks. The first, or promenade-deck, extends the whole length and breadth of the vessel, excepting the parts in the bow and stern forming the "turtle." The second deck is an open one. Along the sides of the vessel and along the middle are the quarters for the officers and engineers, and a number of state-rooms for intermediate passengers. In the third, or main-deck, accommodations are provided for three hundred and forty first-class, sixty second-class, and one hundred and eighteen steerage passengers. This deck, amidships, is taken up entirely by the state-rooms and dining-saloons for first-class passengers. The entrance to the main saloon is by a spacious stairway from the second deck, and is handsomely

arranged. The main saloon is 50 feet wide and 64 feet long, and has a seating capacity for 280 people. The ceiling is 9 feet high, but a cupola of stained glass, 23 feet long and 15 feet wide, makes the centre of the main saloon 20 feet high. The sides of the saloon are finished in hard woods, with panels of maple, teak, satin, and oak inlaid. The upholstery is in blue Utrecht velvet. Near the saloon is the ladies' cabin, upholstered with rich brocaded tapestry, with sofas well arranged for comfort and ease. Communicating with this room are the ladies' bath-rooms, which are complete in every particular. The smoking-room is 28 feet wide and 24 feet long. It is floored in parquetry. There are four bath-rooms on the main-deck, as well as lavatories at convenient places. The fourth deck is devoted to steerage passengers, and will accommodate one thousand persons. The fifth deck is used entirely for cargo. The "Alaska" is fitted with steam-windlass, steam steering-gear, steam-winches, and all the most improved appliances for navigation and for promoting the comfort of the passengers. There are electric bells communicating with the chief steward's office throughout the ship, and she is fitted with Swan's electric lights.

*1867.*—THE OLD DOMINION STEAMSHIP COMPANY succeeded the New York and Virginia Steamship Company, which ran the route previous to the Civil War.

The service of the Old Dominion Steamship Company now embraces the following lines of passenger travel: Main Line—New York to Norfolk, Portsmouth, Newport News, Petersburg, and Richmond, Virginia. Norfolk Division—Norfolk to Old Point Comfort (Fortress Monroe), Hampton, Newport News, Smithfield, Yorktown, Matthews, Gloucester, and Cherrystone, Virginia. North Carolina Division—Elizabeth City to Washington, South Creek, Makeley's, Newberne, and Riverdale, North Carolina; Washington, North Carolina, to Greenville and Tarboro, North Carolina, etc. Delaware Division—New York to Lewes, Delaware; Franklin City, Virginia, to Chincoteague, Virginia, etc. West Point Division—New York to West Point, Virginia; freight only.

The line commenced with three steamers of less than 3000 tons burden combined. The following named are its present fleet:

The "Roanoke," iron propeller, freight and passengers, 2354 tons, New York.

The "Guyandotte," iron propeller, of the same class and build as the "Roanoke."

The "Old Dominion," iron side-wheel steamship, freight and passengers, 2222 tons.

The "Wyanoke," iron side-wheel steamship, freight and passengers, 2068 tons.

The "Richmond," iron propeller, freight and passengers, 1436 tons.

The "Manhattan," iron propeller, freight and passengers, 1400 tons.

The "Breakwater," iron propeller, freight and passengers, 1110 tons.

The "Rapidan," wooden side-wheel, freight, 868 tons.

Steamer "Widgeon," Swift, master.

Steamer "Transfer."

The "Northampton," wooden side-wheel, freight and passengers, 600 tons.

The "Accomack," wooden side-wheel, freight and passengers, 434 tons.

The "Shenandoah," wooden side-wheel.

The "Luray," wooden side-wheel.

The "Newberne," iron propeller, freight and passengers, 400 tons.

The "Pamlico," wooden propeller, 252 tons.

And about 2000 tons in barges, propellers, lighters, etc., or about 20,000 tons in all.

The passenger accommodations of the Old Dominion steamships are of the most comfortable and superb character; the saloons are substantially and elegantly furnished, the tables well supplied, and in fact they are wanting in nothing calculated to make a trip upon them desirable and pleasant. During the company's career of fifteen years *not a single life intrusted to its care has been lost.* Through the worst storms and series of marine disasters these steamships have always passed in perfect safety.

The movement of freights northward by this line consists of the products of mine, field, and forest,—ores, marble, granite, logs, lumber, and their products, cotton, tobacco, rice, peanuts, and every variety of produce, fish, oysters, etc.

South-bound, all kinds of merchandise.

Besides points immediately reached by steamers, intimate rail connections exist with all parts of the South, Southwest, and West, and freights and passengers transferred to and from the same.

An almost daily line is maintained. During August, 1882, forty-five arrivals of this company's boats were entered in New York. They probably handle, agents of the company say, as great a volume of business in tons as any other company, either foreign or domestic, in this country.

The "Roanoke," and the "Guyandotte," of 1355 tons each, built at Roach's ship-yard, Chester, Pennsylvania, are two iron screw steamships of a very superior character. The dimensions are: Length, 270 feet; breadth of beam, 41 feet; depth of hold from base line, 26 feet, 9 inches. The steamers were built under the special inspection and in accordance with the rule of the American Shipmasters' Association, and are classed for twenty years in the "Record of American Shipping."

They are supplied with water-tight bulkheads, and have every appliance for the safety and comfort of passengers. There are three decks and a hurricane-deck. Excellent accommodations are supplied for 100 cabin passengers, state-rooms for which are of large size and elegantly upholstered and appointed, having all modern conveniences. The saloons are finished in a choice variety of hard woods, and handsomely upholstered and furnished. Thorough ventilation is supplied, and everything done which experience can suggest to make these steamships among the best in the coasting trade. They have compound engines, the high-pressure cylinders being 38 inches in diameter, and the low-pressure 74 inches. The length of stroke of the piston is 4½ feet. Four steel boilers, 13 feet in diameter, 12 feet long, and tested to carry 90 pounds of steam, insure a good rate of speed.

*1870.*—THE WHITE STAR LINE.—The White Star Line was originally composed of a fleet of fast-sailing American clipper-ships, by the "Champion of the Seas," "Blue Jacket," "White Star," "Shalimar," etc., sailing to Australia. To this line Messrs. Imray & Co. succeeded, and still carry it on with fast vessels, built of iron.

In 1870 the establishment of the line of steamships taking this name was claimed as a new departure in ocean steamship management. The ships of the line differed in model, internal arrangements, and equipment from all their predecessors. They were designed to combine the highest speed with unprecedented comfort and convenience for passengers.

Nautical critics are conservative, and look with great distrust upon marked innovations in naval construction, and these vessels were the subject of unfavorable comments. They might do for summer passages, but doubts were expressed whether they would endure the test of a North Atlantic winter. It was an innovation that the vessels of the line should be built at Belfast instead of upon the Clyde, the stipulation being that the ships were to be constructed of strength, size, and power to equal, if not surpass, anything upon the Mersey. The builders were not limited by contract, but left to fulfill the general instructions given. When the first vessels of the line were brought to Liverpool from Belfast they created a "sensation," and became the subject of comment and observation. Events have proved that the builders reached a high degree of speed and safety, and that no steamships have been better able to cope with the winter storms of the Atlantic. For ten years, in winter as in summer, the steamships of the White Star Line have lived down adverse criticism. The best evidence of the value of the improvements introduced by the White Star Company is that they have been adopted by rival lines. The White Star steamers range from 3700 to 5000 tons, and are among the largest in the world. They are built with regard to strength no less than speed, and constructed on the floating-tube principle, with seven

water-tight and fire-proof iron bulkheads. They are steered by steam, and have the principal saloon and state-rooms amidships. A complete inspection by the commanding officer is made before every voyage, when the men are put through a boat-service drill and a drill in defense of fire, which is repeated once or twice at sea on each voyage. The discipline is as pronounced as on board ships of the royal navy. From February to July, when the ice is drifting with the Gulf Stream, the White Star vessels are navigated by a southerly track, and *vice versa* from August to January. When the ice has drifted, and the northern parallels are clear of ice and fog, the boats take the northern track.

The average passages of the steamships of the White Star Line, both ways between Queenstown and New York, have been under nine days, and many passages have been under eight days. In July, 1875, the "Germania" made the passage from Queenstown to New York in 7 days, 23 hours, 7 minutes, and the return passage in August in 7 days, 22 hours, 8 minutes. The "Adriatic" and the "Baltic" have made passages under eight days, and in February, 1876, the "Germania" eclipsed herself and all other vessels of the line by steaming from Sandy Hook to Queenstown in 7 days, 15 hours, 17 minutes, having traversed 2894 knots, equal to 15.8 knots per hour for the entire passage. In 1877 the "Germania" made the passage in 7 days, 11 hours, 27 minutes. The "Britannia" made the passage in 7 days, 10 hours, 53 minutes.

A passenger describing these vessels says of them:

"In their internal arrangements the White Star ships are even more strikingly a 'new departure' in steamship architecture than in their model. The main saloon, instead of being at the stern, and hemmed in by state-rooms, making a long, narrow, badly-lighted apartment, is placed in the very middle of the vessel, and extends from side to side, forming a grand hall 75 feet long and 45 feet wide, lighted not only by the ample skylights but by large windows at the sides. A broad staircase, well lighted by night and day, leads to the saloon, where there is ample room for dining two hundred persons, giving to each diner his or her own seat, not of undefined capacity on a settee, but a chair with revolving seat, which is kept at every meal for the passenger to whom it is allotted at the commencement of the voyage, and can be approached at any time during the progress of the meals without disturbing the others. There is nothing to indicate that you are on shipboard; indeed, there is every appearance of hotel life of the most elegant and comfortable style, including even an open marble fireplace, which substitutes the customary stove and gives an additional air of homeliness to the scene.

"The state-rooms are also arranged amidships, at either end of the saloon, and are large, well-lighted, and furnished with every convenience, including electric bells. Bath-rooms are within easy reach, and

nothing that can promote the comfort of the passenger is omitted. The smoking-room is not, as too often, a close little den, but a large and handsome apartment; and the ladies' saloon is on a more liberal scale than usual, and far more attractive in its appointments. From their situation and the great length of the ships, the main saloon, the state-rooms, and all the rooms for the general use of the passengers, are almost entirely free from motion, except in the worst of weather, thus reducing the risk of sea-sickness to a minimum.

"Five water-tight bulkheads run from the top to the bottom of the ship. These are supplemented by self-closing doors, and other appliances designed to confine a leak or the effect of an accident to that part of the vessel to which the mishap may have occurred. These doors are perfectly self-acting and almost independent of human agency. In one compartment, containing the after-set of boilers, the door which leads to the next compartment is arranged for prompt water-tight closing. Should the water find its way into the neighboring compartment, the engineer in charge has only to turn a lever and the ponderous door falls into its place, regulated in its descent by an air cylinder, which checks the door and causes it to fall in jerks. In another compartment you find that the iron way, upon which you walk, is automatic. Should the sea find its way beneath, the door (for the flooring upon which you have passed is, after all, only a kind of iron bridge) rises by the action of the water, and confines the water to a section of the vessel. There is nothing more remarkable in the fittings of these steamers than these self-acting doors, which are always kept in perfect order, working with a simplicity only equaled by the importance of the work they can accomplish."

The managers of the line have adopted "ic" as a termination for the names of their vessels, as "Adriatic," "Celtic," "Baltic," "Britannic," "Germanic," "Republic," etc.

At a meeting of the passengers assembled in the saloon of the steamer "Britannic," off Sandy Hook, on the evening of August 17, 1877, on the completion of the voyage from Queenstown in the unprecedented time of 7 days, 10 hours, and 53 minutes, it was "*Resolved*, To ask Captain Thompson to accept a souvenir, suitably inscribed, to commemorate this achievement." Thirty passengers and a number of invited guests were present. The souvenir consisted of a silver pitcher, with this inscription: "Presented to Captain Wm. H. Thompson, of S. S. 'Britannic,' by the passengers, to commemorate the voyage from Queenstown to New York, August 10 to August 17, 1877." The presentation speech by D. W. James humorously contrasted the discomforts of ocean travel twenty years ago with the speed and conveniences which modern vessels afford.

A silver cup, appropriately inscribed, was also presented to the chief engineer of the "Britannic," Thomas Sewell, as a mark of the

passengers' appreciation of his skill and care during the voyage, September 29, 1877.

The "Coptic," the latest addition to the White Star Line, arrived at New York December 3, 1881, after an exceedingly rough passage of sixteen days. The "Coptic" is a sister ship to the "Arabic," of the same line, and was built at Belfast, Ireland. The material used in her construction is milled steel, which was chosen on account of its strength and toughness. Her dimensions are: Length, 430 feet; breadth, 42 feet; and depth of hold, 34 feet. Her registered tonnage is 4368 tons, but she will carry about 6000. She is propelled by two double-cylindered compound engines of 450 horse-power at 90 pounds pressure of steam. These were built by the Victoria Engine-Works, Liverpool. The main shaft is a built one. In the engine-room are the very large pumps. In the next room are two dynamos, which furnish electricity for the Swan electric lights used throughout the ship. There are three double elliptical boilers, which require twelve fires to heat them, and have been tested to 180 pounds. While the "Coptic" is intended to be used more for carrying freight than passengers, the accommodations for passengers are very good. The state-rooms are large and supplied with all the conveniences known to modern ship-builders. The main saloon is handsomely upholstered in dark olive velvet, and is approached through an entrance hall from the main staircase. The saloon is paneled in wood made to simulate embossed leather. The chairs are cane-seated and revolving. The light all through the ship is furnished by the Swan electric lamps, which consist of carbonized threads inclosed in hermetically sealed glass bulbs. The hull of the "Coptic" is divided into eight compartments, either one of which might be stove in without endangering the vessel. The principle upon which the doors of these compartments are worked is comparatively new, and has been so highly approved by the English Admiralty Board that the government has adopted it in building vessels for the navy. The "Coptic" has four masts, three being square-rigged, and the fourth being fore- and aft-rigged. There are three decks, braced in every direction, and turtle-backs fore and aft.

The "Coptic" left Queenstown, on her first trip, on the 17th of November, 1881. Her captain said of her, "She behaved very well. We had about as heavy weather as I have seen, and nothing could be more satisfactory than the 'Coptic.' When we were in about forty degrees west we were struck by a hurricane. On the 28th she was struck aft by a sea which stove in the after turtle-back over the rudder, swept everything loose away, stove in two boats, and carried two sailors overboard. We could do nothing to save them, because no boat could live in such a sea. The iron plates over the wheel were broken in. The stout iron rods were bent and twisted by the water as though they had been light wires in the hands of a strong man."

The chief engineer said of the engines, "They work beautifully. One man can, by moving six little levers, work the whole engine with one-half the effort ordinarily required to manage a small stationary engine. It works rapidly too. On this side is the signal-plate which connects with the bridge. The engineer can in less than a minute after receiving the order to stop, go ahead at full or half speed, or back. They are as easily managed as any engines I have ever seen. The new lights make the engine-room as light as day."

The "Coptic" and her sister ship, the "Arabic," are intended for the carrying of freight and emigrants. The "Coptic" will probably be sent to the Pacific in two or three years, to run between San Francisco and Hong-Kong. She will carry more freight, run faster on a given amount of coal, said her captain, than any vessel now running between New York and England. The "Coptic," on her first trip, brought a few saloon passengers, three hundred emigrants, and a full cargo of freight.

NAVIGAZIONE GENERALE ITALIANA.—This great steamship company, whose head-quarters are in Rome, with departments at Genoa and Palermo, is a union of Florios and Rubattinos companies, and have service extending all over the Mediterranean, and up the Adriatic and Black Sea, and to India, also to New York. The I. & V. Florio Company, of Palermo, began operations about twenty-five or thirty years ago, and five years ago absorbed the Trinacria Company, of Palermo, making their fleet about forty-five steamers of various sizes. Later, they consolidated with the Rubattino Company, of Geneva, whose business was, in a great part, to the East, through the Suez Canal, the combined fleet consisting now of ninety-two steam vessels, exclusive of several very large ones which are being constructed. In the New York trade they now have employed three steamers regularly of large tonnage,—viz., the "Archemede," 4500 tons; the "Washington," 4000 tons; and the "Vincenzo Florio," 4000 tons; besides three other steamers of somewhat smaller tonnage, employed as trade requires. Three other steamers are being built for the New York Line, and it is anticipated six steamships will be running regularly on that line in the course of a year. A recent newspaper says, speaking of this company,—

"The Italian government is rendering essential aid to the efforts of its citizens to extend the commerce of the country. Under the promise of large bounties from the government, two great shipping firms at Genoa have united and have given orders to English builders for *twenty steamers, all of them ranging between* 4000 *and* 5000 *tons register*. For many years the traffic of the great Italian port has been stationary, Marseilles having outrun it under the changed conditions of modern commerce. An effort is now to be made to restore the prosperity of former days, and immense new docks have been constructed.

The new steamers will not be confined to the Mediterranean trade, but lines will be established to both coasts of the American continent."

The company's steam fleet consists of the following-named steamships,—viz:

BELONGING TO THE GENOA BRANCH.

| Name. | Tons. | Name. | Tons. |
|---|---|---|---|
| Abissinia | 3600 | Italia | 600 |
| Adriatico | 1200 | Liguria | 550 |
| Africa | 1200 | Lombardia | 500 |
| Alessandro Volta | 600 | Malabar | 1900 |
| Arabia | 1400 | Malta | 1000 |
| Asia | 1300 | Manilla | 4800 |
| Assiria | 1600 | Messina | 1200 |
| Bengala | 1600 | Montcalieri | 600 |
| Birmania | 3200 | Palestine | 900 |
| Calabria | 1400 | Palmaria | 1000 |
| Candia | 1000 | Persia | 1400 |
| Caprera | 600 | Pertusola | 800 |
| China | 5000 | Pianosa | 100 |
| Cipro | 1100 | Piemonte | 400 |
| Christoforo Colombo | 500 | Roma | 2200 |
| Conte Menabrea | 200 | Sardegna | 400 |
| Corsica | 200 | Sicilia | 800 |
| Egitto | 1300 | Singapore | 4500 |
| Elba | 200 | Sumatra | 2200 |
| Giava | 3600 | Tortola | 150 |
| Gorgona | 200 | Torcana | 400 |
| India | 1400 | Umbria | 300 |

Raffaele Rubattino, 5000 tons (building).

BELONGING TO THE PALERMO BRANCH.

| Name. | Tons. | Name. | Tons. |
|---|---|---|---|
| Alfredo Cappellini | 150 | Marsala | 2300 |
| Amerigo Vespucci | 400 | Mediterraneo | 1800 |
| Ancona | 700 | Milano | 400 |
| Archemede | 4500 | Moretto | 100 |
| Bagnaria | 1200 | Napoli | 450 |
| Barone Ricasoli | 200 | Oreto | 700 |
| Campidoglio | 500 | Orlegia | 2200 |
| Cariddi | 1200 | Pachino | 1200 |
| Dripane | 2000 | Palermo | 480 |
| Egadi | 2600 | Peloro | 2500 |
| Egida | 100 | Principe Amedeo | 1200 |
| Elettrico | 450 | Principe Oddone | 1200 |
| Enna | 2000 | Scilla | 1200 |
| Etna | 500 | Sagesta | 2500 |
| Faro | 1500 | Selinunte | 1800 |
| Firenze | 450 | Simeto | 2300 |
| Flavis Gioja | 400 | Solunto | 2500 |
| Galileo Galilei | 400 | Taormina | 1800 |
| Imera | 1800 | Tigre | 400 |
| Jonio | 1500 | Tirreno | 800 |
| Leone | 550 | Venezia | 900 |
| Liliteo | 1200 | Vincenzio Florio | 4000 |
| Marco Polo | 400 | Washington | 4000 |

*1871.*—The American Steamship Company of Philadelphia was organized in 1871 with a capital of $2,500,000, and a contract was given to Messrs. Cramp & Sons, of Philadelphia, for the construction of four first-class iron steamships of 3000 tons burden, and to have an average speed of thirteen knots an hour. The steamers were intended to carry the mails and conduct a general freight and passenger business between Philadelphia and Liverpool, calling at Queenstown. The "Pennsylvania," the pioneer steamship of the line, was launched in August, 1872, and made her first voyage in May, 1873. The "Ohio," "Indiana," and "Illinois" followed at regular intervals. They are 360 feet long, 42 feet beam, and 33 feet depth of hold. Their engines are nominally 500 horse-power, and capable of being worked up to 3000. Their great breadth of beam, in proportion to their length, tends to increase their steadiness at sea. This line is now the only transatlantic line sailing under the American flag, and the fleet in 1881 embraced the following nine first-class steamships:

| | Tons. | | Tons |
|---|---|---|---|
| Pennsylvania | 3104 | Lord Gough | 3655 |
| Ohio | 3104 | British Crown | 3487 |
| Indiana | 3104 | British Queen | 3558 |
| Illinois | 3104 | British King | 3558 |
| Lord Clive | 3386 | British Prince | 3858 |

A steamer of the fleet sails every Wednesday and Saturday between Liverpool and Philadelphia from each port, calling at Queenstown. They are capable of carrying 100 first-class, 75 intermediate, and 800 steerage passengers, with from 3500 to 4500 tons of freight. A portion of the main-deck is set apart for the special accommodation of "intermediate" passengers. Families can secure separate rooms, and have their meals served apart from the other passengers, at about half the price paid by the holders of first-class tickets, and the bill of fare is ample and varied. The accommodations for steerage passengers are excellent, and great pains is taken to secure comfort and to provide wholesome and unstinted food for this class of voyagers.

The largest vessel of the line, the "British Prince," is 419 feet long, has 42 feet beam and 28 feet depth of hold, and is 3858 tons register.

The shortest passage of any steamship of the line was made by the "Illinois," October, 1880, from Queenstown to Cape Henlopen, in eight days, ten hours, and thirty-four minutes, beating the "Pennsylvania's" shortest time of eight days, nineteen hours, and twelve minutes. The average passage is about ten days. The "Illinois," in her 59 round voyages, or 118 passages, has had six years, ten months, and thirteen days *sea service.* In 59 passages out to Queenstown she traveled 173,000 miles, and in 59 home to Henlopen, 171,092 miles, a distance of 344,092 miles, to which must be added 10,620 miles up

and down the Delaware, and 27,966 miles from Queenstown to Liverpool, making the total nautical miles 382,678, equal to 441,093 statute miles.

Safeguards against loss of life at sea are a feature in the equipments of these steamers. In addition to the usual complement of life-boats of the ordinary construction, each carries a number of life-rafts, provided with bread- and water-tanks, always kept supplied. These rafts can be thrown into the water with scarcely a moment's delay; and have appliances for the accommodation of passengers on both top and bottom, and are always right side up. They are more available in a storm than ordinary life-boats, which have to be lowered with caution, and are frequently stove against the side of the ship and rendered useless.

General Grant, on starting upon his trip around the world, on the 17th of May, 1877, took his departure from Philadelphia in one of these steamers, the "Indiana."

The five latest additions to the line were built in Great Britain, two being constructed by Harland & Wolff, of Belfast, and three by the Lairds, of Liverpool. Although of greater tonnage, they are not fitted to carry as many *first-class* passengers as the American-built ships.

CITY LINE OF OCEAN STEAMSHIPS.—The steamships of this line sailing fortnightly *via* the Suez Canal from Glasgow and Liverpool to Calcutta direct and back to London, are so called because they are named for the principal cities of the world. They are owned by Messrs. George Smith & Sons, of Glasgow, and comprise twelve steamships, varying in tonnage from 3750 to 2328 tons,—viz.:

| | Tons. | | Tons. |
|---|---|---|---|
| City of Damascus | 3,750 | City of Edinburgh | 3,212 |
| City of Agra | 3,412 | City of Canterbury | 3,212 |
| City of London | 3,212 | City of Carthage | 2,650 |
| City of Khios | 3,246 | City of Mecca | 2,290 |
| City of Venice | 3,206 | City of Oxford | 2,328 |
| City of Manchester | 3,125 | | |
| City of Cambridge | 2,329 | Total tonnage of the fleet | 35,972 |

THE STATE STEAMSHIP LINE was established in 1872 by a British company, in Glasgow. The steamers comprising the fleet have all been built on the Clyde, by the Glasgow Engineering and Ship-Building Company, especially for the North Atlantic passenger traffic. Each steamer is constructed with an especial view to safety, which is invariably the first consideration in all deliberations regarding the operations of the company. It is due to the care and vigilance of the company's officers that the line has been so fortunate in escaping accidents.

The officers of this company are supplied with, and instructed to use carefully and often in case of fogs, and on all occasions of uncer-

tainty, the log, patent log, head-line, and Sir William Thomson's sounding-machine. Officers are also instructed as to the necessary precautions in the avoidance of danger from collision with fishermen off the Banks, and from icebergs. Intemperance is uncompromisingly dealt with, and no officer employed or retained who is addicted to the excessive use of spirituous liquors.

The cabins are situated on the main-deck, in the portion of the steamer where the least motion is felt, and consequently the less liability to sea-sickness. The state-rooms are arranged with two berths and a sofa; are large, light, and well ventilated. For the convenience of ladies, there are private baths and dressing-rooms in the main saloon, and reception-rooms on deck. There are also provided for gentlemen, baths, smoking- and reading-rooms, and everything necessary for their comfort and enjoyment during the voyage. For the general use of passengers there are comprehensive libraries of selected books, pianos, and other musical instruments, and most tastefully arranged concert-halls. The main dining-saloons, which are luxuriously furnished, extend entirely across the steamers, and are provided with revolving chairs, and other improvements for convenience and comfort.

The tables are always supplied with all seasonable delicacies, and an abundance of the best quality of the more substantial and necessary eatables, *à la carte*. Attentive stewards are at the disposal of passengers.

Experienced surgeons also accompany each steamer.

The second cabins of this line are in the centre portion of the steamers on main-deck. The berths are similar to those in the first cabin, with plenty of clean linen, and the floors are carpeted, the only difference being that there are four in a room, and occasionally more. Second-cabin passengers are not permitted in the saloon or smoking-rooms. There are separate dining-tables, and well-prepared meals are served three times daily. During the busy season the sexes are separated; but whenever it is practicable to book families together it is invariably done.

Steerage passengers receive special attention by the State Line Company, and this company has made special arrangements for the convenience of families, who are allotted to special rooms wherever practicable. The proper separation of the sexes and the provision for the privacy of single women has also been looked after in the State Line steamers. Good provision is made for ventilation and other necessary comfort. There is always a liberal supply of well-cooked food on hand, which is served out unsparingly. The surgeon visits the steerage apartments three times regularly every day, and oftener when necessary. Special hospitals are also arranged on deck for the isolation of patients when necessary.

During the year 1881 the company added to their fleet two new

and large steamers,—the "State of Nebraska" and the "State of Florida." Both of these are specimens of marine architecture of which the company may well be proud. They are about 400 feet long, 42 feet wide, and have a tonnage measurement of between 4000 and 5000. There are accommodations for about 100 first-class saloon, 80 second-cabin, and several hundred steerage passengers.

The saloons, which are on the main-deck, extend entirely across the steamer, are provided with six long dining-tables with revolving chairs of the most approved pattern, securely fixed so as to afford the greatest ease for passengers while enjoying their meals. The saloons are lighted by skylights from above, and the usual side port-holes. In the upper portion of the saloon is a circular balcony or gallery, at one end of which is a piano and at the other a pipe-organ, and around the sides are elegantly upholstered seats. This room is called the concert-hall.

The state-rooms are both forward and aft of the saloons, and they are unusually large, well lighted and ventilated. They are fitted with two berths each, and a sofa berth, which may be utilized by children or members of the same family, if they so desire.

From the ladies' saloon a wide companion-way leads up to the hurricane-decks, which extend the entire breadth of the vessels, and are 125 feet in length, affording a splendid promenade.

The ladies' private dressing-rooms, gentlemen's smoking-rooms, libraries, bath-rooms, etc., are all well arranged and provided with all necessary appointments for convenience and luxury.

The second cabins are situated forward of the saloons, and are provided with a comfortable saloon and separate tables. The state-rooms are about the same as those in the saloon,—the floors carpeted, and plenty of bedding provided,—so that while the passengers by this class are not allowed the extra privileges of the saloon passengers, yet they certainly have here most comfortable quarters.

The steerage berths are also situated on the main-deck, and are unusually convenient and comfortable. The berths are arranged and classified so as to afford more retirement and privacy to single women, and large rooms for families where they may remain intact. There are also provisions for good ventilation and cleanliness, and also hospitals for the sick in case such are required.

ROUTE, LENGTH OF TRIP, ETC.—The route of the State Line steamers is from New York, every Thursday, to Glasgow direct. From Glasgow steamers sail every Friday, calling at Belfast, from which port a steamer sails every Saturday. The average length of voyage is nine to ten days between New York and Glasgow, and *vice versa*. The steamers of this line take the direct course across the Atlantic, passing the north coast of Ireland, thus avoiding the unpleasant experience of a trip through St. George's Channel.

The company's fleet is composed of the "State of Nebraska," about

4500 tons; "State of Florida," about 4000 tons; "State of Indiana," about 3000 tons; "State of Nevada," about 3000 tons; "State of Pennsylvania," about 3000 tons; "State of Georgia," about 3000 tons; "State of Alabama," about 3000 tons; "State of ———," building.

*1873.*—THE RED STAR LINE.—The Red Star Line, of Belgian Royal Mail Steamers, between Antwerp and New York and Philadelphia, was inaugurated in 1873, under the auspices of the King of the Belgians, and now comprises seven large, full-powered steamers, forming a weekly line, sailing from Europe and America every Saturday. The latest additions to the fleet, the "Belgenland," the "Rhynland," and the "Waesland," are built with all the modern appliances for comfort and safety, and are among the largest and fastest steamships in the Atlantic trade.

The fleet comprises the following first-class steamers:

| STEAMERS. | Built. | Tons. | Beam. | Length. |
|---|---|---|---|---|
| Waesland . . . . . | 1880 | 5000 | 43 feet. | 445 feet. |
| Rhynland . . . . . | 1879 | 4000 | 40 " | 418 " |
| Belgenland . . . . . | 1879 | 4000 | 40 " | 418 " |
| Switzerland . . . . . | 1874 | 3000 | 39 " | 345 " |
| Nederland . . . . . | 1878 | 3000 | 39 " | 345 " |
| Vaderland . . . . . | 1872 | 3000 | 39 " | 330 " |
| Zeeland . . . . . | 1878 | 3500 | 43 " | 370 " |
| New Steamer (building) . . | . . . | 5000 | 43 " | 445 " |

The "Belgenland" and the "Rhynland" were added to the fleet in 1879, and were built by the celebrated Barrow Ship-Building Company, of Barrow, England. Their engines are compounded, of about 2200 indicated horse-power, and consume forty-five to fifty tons of coal per day, producing an average speed of fourteen knots per hour. They have accommodations for 150 cabin and 1000 steerage passengers.

The "Waesland," added in 1880, is from the ship-yards of Harland & Wolff, of Belfast. She is of 5000 tons burden, 445 feet long, 43 feet beam, and 34 feet 8 inches depth of hold. She has four decks, three of them of iron, and four iron masts, two of which are square-rigged. She can accommodate 150 cabin and 1500 steerage passengers. These vessels are of the highest class in every respect, having been built under the special survey of the Inspectors of British Lloyds and Bureau Veritas, the leading authorities on the classification of ships. The state-rooms and saloons are in the centre of the ship, where the least motion is felt, and are supplied with the latest improvements in ventilating apparatus, electric bells, commodious bath- and smoking-rooms, etc.

The second cabins and state-rooms are situated above the main-deck (the same deck as the first cabin), in the after part of the ship. They have the same perfect ventilation as the first cabins, and are unsurpassed in cleanliness and convenience, being admirably adapted for

families and passengers generally who may wish to exercise a moderate amount of economy in their voyage to and from Europe.

The American Line (running between Philadelphia and Liverpool) and the Red Star Line (running between New York and Antwerp) are under one management, and first-class round-trip tickets issued for one line are good to return on the other. Holders of first-cabin excursion tickets by the Red Star Line who may be in England, and not caring to recross the English Channel, can therefore return by the American Line direct from Liverpool to Philadelphia, by applying to the agents of the American Line at Liverpool.

To those who wish to go direct to the Continent, the Red Star Line offers unusual inducements. The voyages to Antwerp are direct and uninterrupted, and on landing at that port the passenger finds himself but a short distance from Paris, and within easy travel of the leading continental cities.

*1874.*—THE MONARCH LINE.—The legal and corporate name of this company is "The Royal Exchange Shipping Company" (limited), but it is better known as the Monarch Line, from the nomenclature adopted by the company for the ships of its fleet. The ships are all well built of iron and steel, with a double hull and six water-tight compartments, the bulkheads running from the keelson to the upper-deck. They are 400 feet in length, 45 feet beam, 33 feet depth of hold, and are of a gross tonnage of 4500 tons, with engines of 2500 horse-power. They are built under the British Admiralty Survey, to comply with their stringent rules for government transport service. Their accommodations are similar and equal to those of the steamers of other transatlantic lines. Several of the ships of this line have been taken up as transports by the English government in the several wars it has been engaged in since 1874.

The "Grecian Monarch," the latest addition to the line, and which arrived from London at New York, September, 1882, on her first trip, is thus described in the *Daily Graphic* of the 16th:

"Lying at her dock next the Pavonia Ferry in Jersey City, her huge sides exposed to view, and her masts, which are of iron, glistening in the sunlight, the steamer looked a craft of rare beauty. She is not large as compared with some of the modern monsters in the shape of vessels that now cross the sea, but she is symmetrical and strongly built, the main purpose of her construction being evidently safety rather than a high rate of speed. Over all she is 400 feet long, while her breadth of beam is 43 feet and her hold 33 feet. She is 4364 tons burden, and above the spar-deck has a hurricane-deck 166 feet long and 30 feet wide. She has accommodations in the steerage for 1000 passengers, and in the cabins for 112. The ship is divided into water-tight compartments, and, besides a handsome dining-saloon, smoking-room, and ladies' cabin, has three hospitals,—two located near the

steerage and one on deck. Of the first two, one is set apart for men, while the other is appropriated to the use of women. The third is for patients who may chance to fall ill of an infectious disease. It is completely isolated, and forms an improvement worthy of special note. Like her sister vessels, the "Grecian Monarch" is peculiarly fitted for troop service, and is on the English Admiralty list for that purpose. The steerage is more commodious, however, than on the other ships, and the ventilation afforded better than on most ships that come into this port. The state-rooms are of average size, but beautifully and comfortably furnished. The berths are tempting retreats. The saloon, which is almost amidships, is as elegant as that of any first-class hotel. An upright piano of rich ebony is one of its attractions. The apartment is finished in carved oak and maple, and has white ceilings decorated with gold stars. The upholstering is of blue morocco leather and velvet. The captain, officers, and crew, numbering one hundred men, were selected with care. The captain is Mr. R. J. W. Bristow, a gentleman of long experience at sea. He was the late commander of the "Egyptian Monarch," and formerly in the service of the Cunard and White Star Lines. The vessel ran at the rate of fourteen knots per hour in coming from London, but as usual during a first trip there were little hinderances to speed, which will be done away with when the machinery works more smoothly."

The "Assyrian Monarch," in 1882, was honored by having as a passenger from England the celebrated elephant Jumbo. He received royal honors *en route*, the boy crews of the training-ships manning yards as he went by. Lady Burdett-Coutts and party traveled from London to bid the great brute farewell. The Baroness on reaching the "Monarch" went to the forward part of the ship, between decks, to visit the elephant, and gave him a last bun and bid him good-by. The Baroness left a sum of money to purchase sweets, etc., for the "Monarch's" passage. So much interest in England was manifested for Jumbo that the "Monarch" took out elastic bags to be dropped into the sea at intervals in regard to his health, etc., a skillful means of advertising the enormous beast. As she left the Millwall docks she was gayly dressed with flags.

The Monarch Line forms a direct communication between London and New York, and has connections with Havre, Paris, Hamburg, Bremen, Antwerp, Gothenburg, and Copenhagen.

The present fleet consists of the following-named steamships:

| Name. | Built. | Registered Tonnage. | Name. | Built. | Registered Tonnage. |
|---|---|---|---|---|---|
| Norman Monarch . | 1875 | 1482 | Persian Monarch . . | 1880 | 3908 |
| Danish Monarch . . | 1878 | 1338 | Egyptian Monarch . | 1881 | 3916 |
| Celtic Monarch . . | 1879 | 2014 | Lydian Monarch . . | 1881 | 3916 |
| Assyrian Monarch . | 1880 | 3917 | Grecian Monarch . . | 1882 | 4364 |
| Roman Monarch . . | building | 4400 | | | |

THE HARRISON LINE.—This line of steamships, running between New Orleans and Liverpool, has started up since the Civil War, and is the outgrowth of a line of sailing ships which were running as early as 1850. The owners of this line are Thomas and James Harrison, of Liverpool. The following is a list of their steamers in 1882:

| NAME. | Tons Reg. | NAME. | Tons Reg. |
|---|---|---|---|
| Alice | 1182 | Governor | 2650 |
| Architect | 1934 | Historian | 1830 |
| Author | 1393 | Inventor | 2291 |
| Chancellor | 2052 | Legislator | 2126 |
| Chrysolite | 702 | Mariner | 1443 |
| Cogniac | 702 | Mediator | 2011 |
| Commander | 1550 | Merchant | 1443 |
| Counsellor | 2251 | Orator | 1342 |
| Discoverer | 2251 | Professor | 2630 |
| Editor | 1393 | Statesman | 1851 |
| Engineer | 2750 | Warrior | 1231 |
| Explorer | 2010 | | |

THE OCEAN STEAMSHIP COMPANY OF SAVANNAH.—This company runs a line of ocean steamships between New York and Savannah and Philadelphia and Savannah, and owns at present a fleet of nine vessels,—viz., the "City of Augusta," "City of Macon," "City of Savannah," "Juniata," "Dessoug," "Tallahassee," "Chattahoochie," and "Wacoochie." The three last have been recently launched from Roach's yard at Chester. The "City of Columbus" and the "Gate City," formerly of this company, were sold in September, 1882, to a Boston company, which will run them as a connecting line with the Ocean Steamship Company, using the docks of the latter company at Savannah. The "Dessoug," used as a freight boat, is noted for having brought to New York the Egyptian Obelisk presented by the Khedive. The cost of her purchase and refitting amounted to $94,642.58, and she is estimated to be worth $120,000.

The "City of Augusta," until the recent additions to this line, which are not yet in commission, was the largest vessel engaged in the coastwise trade, having a cargo capacity of 3000 tons, or 6000 bales of cotton. She is 323 feet over all, 40 feet beam, has three decks, and five water-tight compartments, and is built of iron. She carries compound engines, with two inverted cylinders, 42½ and 82 inches in diameter respectively. Her screw is 16 feet in diameter, with 26 feet pitch; her working pressure, 100 pounds of steam. She has six steel tubular boilers, and steam steering-gear and capstans. With accommodations for one hundred passengers, her state-rooms are roomy, and her fitting-up is sumptuous. No steamer goes out of New York having more elegant appointments. The saloons are finished in many-colored foreign woods; polished brass dazzles the eye at every point; revolving chairs, elegantly upholstered, solicit the lazy passenger; the table equipments are tasteful and handsome. The personal adminis-

tration of the company's ships leaves nothing to be desired, whether it be seamanship on deck or hospitable courtesy in the saloon.

These ships are greatly used by invalids ordered to Florida or elsewhere in the South by their physicians, and these have usually to make the winter voyage. The ships are steam-heated, and always comfortable, though twenty-four hours out of New York the weather becomes warm. The "City of Macon" and the "Dessoug" rode out the terrible cyclone of August 31, 1881, without damage, and the entire fleet is made up of thoroughly seaworthy ships. The northward-bound traffic is largely made up of cotton, of which 247,944 bales were delivered in New York in 1880–81, an increase of more than one hundred per cent. in three years. Other shipments comprise tobacco, rice, turpentine, rosin, watermelons, fruits, and vegetables, and yellow pine lumber. From New York were sent last year 130,000 tons of sundries and 6357½ tons of railroad iron.

On the retirement of Mr. Waddell (since deceased) last year from the presidency, the late Hon. Edward C. Anderson, many years mayor of Savannah, and an ex-officer of the United States navy, and who had previously been a managing director, was elected to fill the vacancy. The wharves, docks, and warehouses of the company at Savannah are of ample capacity and excellent arrangement for the transaction of its business. Through bills of lading and tickets are given by this company over the Central Railroad of Georgia, Savannah, and Western railroads, and close connection made with the steamers and railroad to Florida.

*1875.*—THE MITU-BISHI STEAM NAVIGATION COMPANY.—This line of steamers, under the Japanese flag, was established in 1875, and its shares were held almost exclusively by Japanese. In 1876 it owned four steamers,—viz., the "Tokio-Murin," *née* "New York," the "Kunayana-Murin," *née* "Madras," the "Takar-Murin," *née* "Acanthia," and the "Zazon;" while others were in course of construction in Great Britain, which were to form a weekly line between China and the Japanese ports of Nagasaki, Hiogo, Imioscki, and Yokohama. This was a great advance from their seclusion and isolation from the rest of the world, from which they were awaked by their treaty with Commodore M. C. Perry, in 1854, only twenty-one years before. This company purchased steamers with great rapidity, and now (1882) owns considerably over thirty steamers, and they are all named for Japanese cities, as "Hiroshima Naru," City of Hiroshima, once the "Golden Age" of the Pacific Mail Company.

THE ATLAS STEAMSHIP COMPANY.—The vessels of the Atlas Line are iron screw ships constructed under the superintendence of the surveyors to English Lloyds, and in accordance with the requirements of the British Board of Trade. The company's fleet consists of the following steamships:

| Name. | Gross Tonnage. | Effective Horse-power. | Name. | Gross Tonnage. | Effective Horse-power. |
|---|---|---|---|---|---|
| Albano | 2350 | 2000 | Avila | 1200 | 900 |
| Alene | 2104 | 1600 | Antilles | 1400 | 1000 |
| Alvo | 2009 | 1500 | Alpin | 890 | 700 |
| Athos | 1943 | 1500 | Arden | 544 | 600 |
| Ailsa | 1950 | 1200 | Arran | 462 | 500 |
| Alps | 1750 | 1000 | Aden Branch steamer | . . | . . |
| Andes | 1750 | 1000 | Etna | 1250 | . . |
| Alvena | 1705 | 950 | Claribel | 1100 | . . |
| Atlas | 1280 | 900 | Also the Satellite tow-boat. | | |

The accommodations for passengers, with a special view to their comfort, are located in the central portion of the steamer, forward of the engines, and both saloons and state-rooms are above the main-deck. This prevents any annoyance from the smell or noise proceeding from the engine-room, whilst the passengers are placed in that part where the motion is least felt and the best ventilation is secured. In the tropics these considerations are of paramount importance to the comfort of travelers. The crew and officers are all berthed in the after-portion of the vessel, so that the forepart is left clear as a promenade-deck. The steamers of this line leave New York every fourteen days for Kingston, Jamaica, Savanilla, Carthagena, and Colon, Aspinwall, from whence they return direct to New York. Their steamers also leave New York every ten days for ports in Hayti, and return *via* Kingston, Jamaica. They also leave New York for Cape Hayti and ports on the north side of Jamaica, and Greytown, Nicaraugua, returning *via* ports in Jamaica to New York. Still another line of their steamers, under the Spanish flag, sail from New York to Maracaibo, calling at Porto Rico, and returning *via* Cape Hayti to New York.

The company has also established, under a contract with the colonial government, a weekly steam-service from Kingston around the island of Jamaica, calling at all the principal ports.

The Atlas Company suddenly advertised, a short time ago, the departure of two apparently new steamers, the "Avila" and the "Antilles," and two of their well-known boats, the "Claribel" and the "Atlas," disappeared as suddenly from their list. Whence these new steamers? What had become of the old ones? It was no secret; the company wished to put two of its vessels under the Spanish flag, and had simply changed the English names to Spanish ones.

George H. Preble,
*Rear-Admiral U.S.N.*

(To be continued.)

## AMONG OUR CONTEMPORARIES.

In June, 1895, the Society of Colonial Wars intend to dedicate a monument at Louisburg, on Cape Breton Island, to commemorate the first notable victory ever won on this continent by colonial troops commanded by colonial officers.

Louisburg was so strongly fortified by the French, at great cost, as to be regarded by them as impregnable, and it was a particularly valuable possession to them, as it commanded the southern entrance to the Gulf of St. Lawrence, and in time of war was a constant menace to British shipping.

The enterprise of capturing this stronghold had its inception in the brain of Governor Shirley, of Massachusetts, who, after wrestling long with doubtful members of the General Council, carried his point by one vote. This was in January, 1745, and so well did the colonies work when once embarked in the enterprise, that in March of the same year over four thousand troops had been raised, transports provided, and the expedition started, with the addition of the sea force of nine ships of war, under Commodore Sir Peter Warren, without which the colonial land force could have effected but little. So well had secrecy been observed that the French had no intimation of an intended attack until the force appeared off the place. A landing was effected in the face of some opposition, and the siege conducted with great vigor, and on June 17 the place capitulated, General Pepperell receiving the keys of the citadel from the French commander, Duchambon.

William Pepperell, afterwards Sir William Pepperell, was a native of Maine and a wealthy merchant of Boston, who contributed twenty-five thousand pounds towards the expenses of the expedition. As a writer in the Philadelphia *Times* recently said, "The name of William Pepperell is one that Americans ought always to honor. He was a typical self-made American, and by his indomitable courage continually inspired confidence in his soldiers." Speaking of the force of about four thousand men which he commanded, the same writer says that this little army was remarkable for the fact that it was the first time that a force had gone out from the colonies on any great undertaking which was not at least partially commanded by English officers. The

results revealed to the colonists, as never before, just what they could do in the fighting line, and after the victory comparisons were freely made between the colonial troops and the British regulars, which were not always favorable to the latter, and even then provoked many petty jealousies. A few years later, when the struggle for independence began, these things were looked back upon, and many of the men who assisted in the capture of Louisburg played an active part in battling for their country's liberty.

It is a singular fact that Colonel Richard Gridley, the engineer who laid out the besieger's works at the siege of Louisburg, directed thirty years later the works on Bunker Hill.

Franklin's *Gazette*, published in Philadelphia, reprints from a Boston paper a letter dated from Louisburg on July 4, in which it is stated that the French main works contained one hundred and forty-eight embrasures for guns, eighty-five cannon, five brass mortars, one iron mortar, and two small brass mortars in store. In the Grand Battery (an outlying fortification, which was carried by a clever *ruse* early in the siege) there were thirty cannon. There were found in the town and in the Island Battery after the surrender one hundred and twelve barrels of powder and some cartridges. Several French men-of-war, conveying troops and supplies, were captured as they tried to enter the harbor.

The particular piece of ground selected for the erection of the monument is high, and overlooks the town, the bay, and the broad Atlantic. It has been given by the owner, Patrick Kennedy, a fisherman, whose grandfather was a soldier in the English army, and who fought at Louisburg at its second capture in 1758. Patrick Kennedy would accept no pay for the little plot required for the monument.

A very fine gun, weighing about four tons, has been discovered buried in the earth, and this, with a number of cannon-balls, will be placed at the foot of the monument. A diver has recovered from the charred remains of a French frigate in the harbor about three hundred cannon-balls and a small brass piece, which it is the intention of the Society to have made into souvenir medals, which will be interesting because made from a cannon which took part in this memorable siege.

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During the past winter a paper upon a supposed pre-Columbian discovery of America was read before the Royal Geographical Society, in London, by Mr. Yule Oldham, lecturer on geography at the University of Cambridge. Many well-known geographers were present, including the names of Mr. C. B. Markham, Sir E. Ommaney, Professor Laughton, and others.

Mr. Oldham was firmly convinced that the Portuguese discovered America. He affirms that there is a strong inherent probability that

in the course of their West African explorations they must have reached the New World, as the distance from Cape Verde, or thereabouts, to Brazil is the shortest, and the winds and currents both combined to make it the easiest route to the western continent. He says that what happened to Cabral may well have happened to earlier navigators. In 1500 Cabral, with a well-equipped fleet, standing out to sea to round Cape Verde on his way to India, was carried on to the Brazilian coast.

The principal proof upon which Mr. Oldham relied for his belief was a remarkable manuscript map made by Andrea Biancho, of Venice, in 1448, in London. On this map, which, among other features of interest, gave for the first time the Portuguese discoveries as far as Cape Verde, there was shown southwest of that cape—in the direction of Brazil—a long stretch of coast-line with the singular inscription, "Genuine Island is distant fifteen hundred miles to the west." Owing to want of space on the parchment on which the map was drawn, this coast-line, though placed at the very edge, was still rather close to the coast of Africa, and the inscription seemed intended to correct this.

On the first map dealing with the Atlantic Ocean after Biancho's map—Behaim's globe of 1492—there was a large island shown in the position indicated by Biancho. Galvano, in his "Discoveries of the World," stated that, in 1447, a Portuguese ship driven in a storm far to the west discovered an island. Mr. Oldham thinks that this was probably Brazil, but, as the Portuguese activity was altogether directed, at that time, to finding a route to the East, the accidental discovery was not followed up.

Andrea Biancho, "captain of a galley," as he signed himself on his map, doubtless obtained his information in Portugal when sailing with the annual Venetian fleet from Venice to London, and deemed it of so much importance that he committed it to parchment in the latter city without waiting till his return home.

Mr. Oldham thought that, although the Portuguese were too busy in another direction to follow out this presumed discovery, they did not, however, forget it, as was shown by their action after the issuing of the famous papal bull of May 4, 1494, with its line of demarcation one hundred leagues west and south of the Cape Verde Islands. What reasons they had for protesting against this line, and what arguments they used to induce the Spaniards to agree to the Tordecillas treaty in the following year, by which the line was moved two hundred and seventy leagues farther to the west, thus eventually securing Brazil to them, had never been clearly set forth. If, however, they were aware of the existence of Brazil, many curious points about their negotiations with Spain were explicable.

A statement by Herrera, the official Spanish historiographer of

the Indies, throws a remarkable light on the matter, for when giving the reasons which led Columbus to select the curious southerly route adopted by him in his third voyage to the West, he said Columbus "resolved to sail to the southward to find out whether King John of Portugal had been mistaken, who affirmed that there was a continent to the southward." There was, therefore, Mr. Oldham maintained, not only the inherent probability of the Portuguese having discovered South America, after Cape Verde had been reached, in 1445, but the definite record on Biancho's map of 1448 of land discovered in that direction, and, moreover, evidence that the Portuguese discovered South America about the year in which Columbus was born.

The expert audience which heard Mr. Oldham express his views gave him much credit for research among old charts too much neglected by geographers, but the general consensus of opinion was that his case was "not proven."

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It is no libel to say that many persons acting as United States consuls abroad are unfitted for the position. The incumbent may be a very worthy person in his way, honest, truthful, and of fair knowledge and business capacity in other lines, and yet far from being an assistance either to the mercantile community or to travelers. Some of them seem to think that their commission confers diplomatic duties and privileges, and that proper attention to an invoice of soap or hides, or to the grievances of "distressed Americans," is a derogation of their importance. Others, again, who have been appointed on account of failing health, devote most of their time to its recovery, and delegate the duties of their office to some native of the country, to the manifest damage not only of the interests of individuals, but of these United States. Some, who have become uneasy under humdrum work at home, obtain an appointment for the sake of enjoyment of leisure and novelty, and do not profess to attend strictly to duty. Those in the latter category remind us of a postulant for the ministry who recently preferred his request to a well-known bishop. When the bishop asked him what had been his business and what were his motives for entering the ministry, he received the reply that the postulant had been conductor of a horse-car and was tired of standing. Which was an honest reply, at least.

While saying this of some classes of consuls, we may add that there are many who are not only competent, but conscientious and industrious, and these, most likely, are the ones to be removed when a change of administration comes. Many of the consuls appointed by our early Presidents served all their lives, gaining in usefulness and in the respect in which they were held by the people among whom their lives were cast. In at least three instances of which we have knowledge the office descended from father to son; but, we believe, there is but one

place remaining where such is the case. Often the man of gentle manners, the linguist, and the observer, is relegated to some obscure post, while the person with political influence—and nothing else—is placed conspicuously, because the salary is greater or the surroundings more desirable.

A recent statement by Admiral Erben in regard to the general inefficiency of our consular service has stirred up the Chambers of Commerce and Boards of Trade of several of our principal cities to make an effort to secure the appointment of better officials. The Boston Merchants' Association has declared, through their executive committee, that "the whole consular service is emphatically business, and the ground plan upon which it is to be conducted should be the same as that upon which business in general is conducted."

Similar expressions come from other bodies as to the importance of an improvement in our consular service. But the great obstacle to a radical reform is found in the Federal Constitution, which mentions consuls among the officers whom the President "shall nominate, and, by and with the advice and consent of the Senate, shall appoint." Congress can, therefore, pass no law prescribing qualifications for consular offices, determining their tenure, or limiting the grounds for removal. "On the other hand," says a contemporary, the New York *Evening Post*, in treating of this subject, "there is nothing in the Constitution or the laws to prevent any President in setting up for himself, or having some body like the Civil Service Commission prepare for him, a code of rules under which consuls would be appointed after a test of their capability; promotions to be made upon merit, and removals to be permitted only for cause. The present civil service rules were, when first established, declared by their opponents to be an infringement on the President's constitutional powers, but they have outgrown this criticism. Just as these rules have strengthened the hands of every new-coming President, regardless of the checks on the spoilsmen which he might have established of his own volition, so an act of legislation in regard to consulships, such as the Morgan bill of the last session, would go a good way towards placing the reform on a permanent basis. The Morgan bill authorizes the President to appoint a commission, consisting of the Secretary of State, two Senators, and two Representatives, to assist in reorganizing the Department of State and the consular and diplomatic service. It provides that two-thirds of the present consular and diplomatic officers shall be gradually recalled within three years, and that a Board of Examiners appointed by the President, to include two professors of law from two leading universities of the United States, and two officers of the Department of State, shall determine the methods of examination for entrance and promotion in the service; and that all admittance by examination shall be to positions in the lowest grade with promotions in regular order."

Mr. Carpenter has been writing to the Philadelphia *Times* most interesting letters from China and Japan, from which we derive the idea that things must have been as flat and uninteresting in Tokio, after the emperor removed his court to Hiroshima, as they were in Turin when the Italian capital was changed to Florence, and, again, in Florence when the Seven-Hilled City became the capital of united Italy.

His Japanese Majesty went to Hiroshima because it is the chief naval port of the empire, and because its geographical position in the west enabled him most conveniently to keep in touch with and direct the movements of the army and navy. As his cabinet and the parliamentary body were taken along with him to the western city, there would be no delay in the workings of the government.

According to the correspondent, but little is heard of the Emperor of Japan in his own dominions, and what information was obtained in regard to his personal habits and mode of life came only in response to diligent questioning. He seems, from all accounts, to be a good business man, and very hard-working. He is said to keep a close watch upon the foreign press, as well as the very numerous papers published in Japan,—passing over, as a rule, ordinary misstatements or criticisms. But if a newspaper becomes at all dangerous in its editorials he gives an order to the censors, and the offending sheet is stopped, while the editor becomes liable to imprisonment.

As the emperor has the appointment of a considerable number of the members of the parliament, and as the constitution is so adroitly worded, he remains the almost absolute ruler, and measures have only to be suggested to be passed.

The crown prince—who is not the son of the empress, but of one of the secondary wives—was sixteen years old in September, 1894, and is said to be a bright lad. He is of dark complexion, like his father, with almond-shaped eyes, and face of the most pronounced Japanese type. Of erect figure, and fond of military pursuits, he has been educated in the nobles' school, and instructed in French and English.

The emperor is taller than most of his subjects, very dark, with long face and heavy features. Except in complexion, his son is not very much like him, his face being rounder and shorter.

There have been one hundred and twenty-one emperors of Japan, all of the same family. The first one governed the country just about twenty-five hundred years ago. He was on the throne long before Julius Cæsar aspired to be emperor of Rome, and three hundred years before Alexander the Great thought he had conquered the world. The Japanese have the history of all their emperors from that time down to this, and they will assure you that the Mikado is a lineal descendant of the first emperor, Jimnu Tenno. Any other royal

family would have run out in less than this time, especially in an isolated country like Japan, but the Japanese have a law forbidding the emperor to marry one of his own family. He has to marry the daughter of one of the court nobles, and the empress is, therefore, not of royal blood.

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That very amusing paragraphist, James Payn, says of the nation spoken of above, "The excellence of the Japanese in warfare has become well established, and they are now developing a keen sense of humor. In this respect, though they have long been the cause of wit in others, the natives of the Flowery Land have always been lamentably deficient, and their recent efforts in that direction—the chopping off the heads of their generals and the plucking of the peacocks' tails from their administrators—have been as childish as ever.

"The Japs themselves, perhaps from their very antipathy to their rivals, or from their own remarkable views of perspective, have hitherto been rather laughed at than with; our ideas of the Mikado, in particular, have been drawn from the Savoy rather than from Yokohama; but that potentate has just issued a manifesto to his troops which is conceived in a very fine vein of fun, and may bear comparison with those of the highest potentates of Europe. 'We highly approve of your service,' he says, speaking of the capture of Port Arthur, 'as the cold is increasing and the end is still far off; keep yourselves in good health and continue your exertions.' This reminds one of the story of the two mutes who, stationed at the door of a rich man's house in snowy weather, sent in for brandy, and received the recommendation to 'jump about and keep themselves warm.'"

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A contemporary, in speaking of the opening of the Dardanelles, says that the rule closing these straits to hostile men-of-war had its origin in a manifesto of the Sultan when the Black Sea was a Turkish lake.

By the Treaty of London, in 1841, signed by representatives of Great Britain, Austria, Prussia, France, and Turkey, this rule of the closure of the straits to war-ships was solemnly sanctioned, and became part of the written laws of Europe. The Treaty of Paris, in 1856, went a step farther,—neutralized the Black Sea, closing it to ships of war and opening it to merchant ships.

On the fall of the French empire in 1870 the neutralization of the Black Sea was at an end. The Czar declared himself no longer bound by the provisions of the Treaty of Paris. Russia's contention on this point received the sanction of the states of Europe at the Treaty of London, in 1871. But the war-ships were still prevented from

passing through the Dardanelles by the following substitution for Articles 11, 13, and 14 of the Treaty of Paris: "The principle of the closure of the Straits of the Dardanelles and of the Bosphorus is maintained, with the right on the part of his Imperial Majesty the Sultan of opening the straits in time of peace to ships of friendly and allied powers in case the Sublime Porte should find it necessary."

"Russia's Black Sea fleet is very strong, and contains some of the most formidable of the new ships. At the opening of the year she had forty ships there, including eight first-class battle-ships and fifteen torpedo-vessels. The first ships she built on the Black Sea, and these were laid down in disregard of the stipulations of the Treaty of Paris, were the 'Catharine II.,' the 'Tchesme,' and the 'Sinope,' launched in 1886–87. They are of 10,150 tons, 16-inch armor, and carry four 12-inch guns. Later came the 'Dvenadzat Apostoloff' (Twelve Apostles), 8100 tons, 14-inch armor, 16.6 knots, and four 12-inch guns; the 'Georgi Pobiedonosetz' (George the Victorious), 10,280 tons, 16-inch armor, 16 knots, and six 12-inch guns; and the 'Tria Svetitelia' (Three Saints), the first of the 12,000-ton battle-ships, to carry 16-inch armor, four 12-inch guns, and a heavy secondary battery, and to steam sixteen knots. The 'Tria Svetitelia' is to be followed by the 'Petropavlovsk,' the 'Poltava,' the 'Sevastopol,' and the 'Sissoi Veliky,' the last named being well under way. These will in time be succeeded by the 'Paris,' of 12,000 tons, to steam 17.5 knots, and carry 12-inch guns, and a sister ship. The ram-ships 'Admiral Oushakoff' and 'Admiral Seniavin,' built as coast-defense vessels, are, as a fact, armored cruisers, having a powerful armament and a speed of sixteen knots."

One who remembers the Crimean days would be apt to think that the fact that such a fleet passed the Dardanelles saluted by unshotted guns would almost cause the bones of stout and choleric Lord Stratford de Redcliffe to turn in their grave.

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The statue of General Bosquet, recently erected at Pau, was placed there not because it was his birthplace, for he was born at Mont-de-Marsan, but because his mother came from Pau, his childhood was passed there, and it was there he resided by preference during the short intervals of repose which his busy military life afforded.

Bosquet, Pierre Joseph François, was born in 1810, and died at Pau in 1861. He was as good a specimen of the French soldier, honest, bluff, and brave, as that gallant nation ever possessed. A republican at heart, and in sympathy with his chiefs and friends, Changarnier, Cavaignac, and Lamoricière, he knew nothing of politics, and did not meddle in political matters, contriving to serve after the *coup d'état* as

a soldier who thought his duty was owing to his country, no matter who was its ruler,—"*Soldat il était, soldat il resta.*"

In 1854 he was made general of the second division of the French army in the Crimea, and at the battle of the Alma distinguished himself by the boldness and vigor of his attack on the Russian left, which assured the victory of the allied army.

At Inkerman his action saved the British troops from a most perilous situation, which was acknowledged by Lord Raglan's saying after the battle, "I thank you in the name of England, and I wish I had four hands to give you instead of the one which is left to me."

In January, 1855, Bosquet was promoted to the command of the French second *corps d'armée*, and on the 7th of June, by a carefully prepared and energetically delivered attack, he captured the Mamelon Vert and adjoining works after a most severe fight.

Then, again, on the 8th of September, he captured the Malakoff bastion, again after minute attention to details in preparation. On this eventful day he was wounded in the chest—at first it was supposed mortally—and was obliged to give up his command and return home.

He had been made grand officer of the Legion of Honor after the Alma, grand cross after Inkerman, and received the military medal after the capture of the Malakoff. On the 9th of February, 1856, he was created senator, and the next month received from the emperor's hands the baton of a marshal of France.

He was not then quite forty-six years old.

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The following item has lately been making the round of the newspapers:

"A GREAT HEIGHT.—A cedar-tree four hundred and seven feet in height and measuring seventy feet in circumference at the base has been felled near Ocosta, Washington. It was sixty feet to the first limb of the tree, and the limb itself was seven feet in diameter. It is estimated that the tree will furnish enough to make over a hundred car-loads of shingles."

"Over a hundred car-loads of shingles!" That is the point which will attract the attention of the average newspaper reader, to the exclusion of the idea of the sad destruction of a noble tree, the life of which extends to a period ages before the Discoverer's ships sailed from Palos.

Reckless and extravagant as we have been in giving away land, not only to all individual comers, but to railroad companies who now charge the government fares for the transportation of its servants, military and other, across their lavish grants,—extravagant as all this is, it is as nothing compared to the destruction of the forests which has

been going on steadily ever since the first white man swung the first ax on our then densely wooded Atlantic border.

A contemporary, the Brooklyn *Eagle*, commenting upon this subject, says, "For years men have gone whithersoever they have listed and have cut and burned where and what they pleased. They have swept away miles on miles of timber, leaving the country dry and hot in summer, and exposed to the fiercest blasts of winter. They have forced up the price of fuel by the careless methods by which they reduced the supply. They have compelled people in the country where wood should be cheap to buy coal at prices that to the farmer are almost ruinous, and have thereby encouraged the dire monopoly enjoyed by the coal barons. They have dried up some of the smaller streams entirely. They have caused some others to shrink in summer. They have caused the largest to decrease in volume. By rendering water more uncertain in supply and difficult to get, they have increased the trouble and expense of farming and manufacturing. Navigation has been driven steadily down on some rivers until row-boats are only to be seen where steamers ran some years ago."

The paper in question then goes on to praise the unanimity displayed by the members of the Constitutional Convention of New York in passing the article relating to the preservation and extension of the woods of that State, and resumes as follows:

"It ought to be understood that there is a great deal in the preservation of these woods. It means more than mere temporary local profit for somebody. It means the good of all, not of the farmers and saw-mill men alone. We cannot have large, reliable rivers without forests at their source. The Hudson is shrinking already, and the government has spent no less than seventeen million dollars in dredging and dyking it. Little, if any, of that money need have been spent had the forest remained. Is it not better to spend half that amount in creating new forests and restoring or preserving the old than to spend twice or thrice the sum in the near future in the attempt to get more water? The Hudson is an artery vital with the life of half the population of the State. All of our important towns stand upon rivers and would feel the effect in commerce, in comfort, in health, were those rivers to be dried up.

"Railroads have got to be restrained in their acquisition and stripping of forest lands; lumbermen must learn to choose before they cut, leaving some of the wood standing, instead of hacking down forests by the mile; watchmen must be appointed to check fires; penalties must be enacted for setting such fires; State parks must be set apart in the Adirondacks, the Catskills, the Helderbergs, and elsewhere, as reservoirs and conservers of water. Stupidity and cupidity have had their way long enough in our woodlands. The people themselves are menaced. We do not ask the men who are hewing and

burning away the woods and reducing the water-supply of the canals and streams to consider the beauty they are destroying. We do not ask them to consider that they are interfering with the weather to some extent, and with health to a greater extent, but we do ask them to cease a work that is interfering with the material prosperity of the State."

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Foreigners, as well as some of our own people who are not well informed in the matter, often express surprise at the friendship between the United States and Russia, the most different of nationalities in almost every respect. Of late years this surprise has been expressed upon two occasions,—one being the prompt sending of ship-loads of food when some portions of the empire were reported to be suffering from famine; the other, the general expression of sorrow for the premature death of the late emperor.

There is most certainly a feeling of cordial friendship; all the stronger because no bone of contention has ever fallen between the two nations, and, so far as human foresight goes, there is no likelihood of our interests clashing in any way. "There are," writes a contemporary, "very strong reasons why such relations exist. It was while British men-of-war were ready to pounce upon our merchantmen on every side, and the French emperor to seize and condemn them in every port, that Russia first manifested a friendship for the United States that has become traditional. The story is told in the history of the administrations of Jefferson and Madison, and is one of the most striking episodes in the annals of the republic. It was the first Alexander who rescued a fleet of our merchantmen from the rapacity of the French and British cruisers, for which the potentate was heartily thanked by our government, and everything Russian at once became popular in this country. In the early days of the Rebellion, Russia again proved a strong and true friend. Alexander II. interposed to prevent the scheme by which Napoleon III. proposed to divide the American Union. In 1862, when the Mason and Slidell incident occurred, and Great Britain began sending troops to Canada and doubled the garrison at Halifax, the Russian government sent a fleet under Admiral Lissovsky to winter in New York. This action, taken in connection with the spirited course of Russia in opposition to the intervention contemplated by the French emperor, undoubtedly saved to the Federal government the opportunity to overcome the rebellious States. Again, for the third time, the Czar who so recently passed away, Alexander III., manifested the traditional friendship of Russia for the United States when Great Britain interfered with our rights at the instigation of Canadian poachers, by insisting that the terms of the Alaskan transfer could not be made the subject of arbitration at the instance of any other power. The purchase of Alaska was a

matter of business between the two governments which proved mutually satisfactory; but outside of this, it will be seen that Russia has for a long period been the steady and consistent friend of the United States, and that her friendship has been manifested at critical times in a way that proved most beneficial to the American nation and to American interests."

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Apropos of the launching of the "St. Louis" some time ago, James Payn, in his notes in the *Illustrated London News*, remarks:

"The teetotal folks in America are shocked at the idea of christening ships with champagne, and on the occasion of baptizing a new liner have generously sent the President (who was to perform the ceremony) a bottle of water as a substitute. This is not a very logical act; indeed, one would think that the waste of a bottle of champagne would have been a subject of satisfaction to them. One of their high-priests in this country proposed, I remember, to empty the contents of a noble wine-cellar into the Thames, and immediately opposite the Houses of Parliament, that the sacrifice might have a national significance. No such principle is involved in the christening of ships, the sort of vintage used for that purpose not being of a class thought highly of by connoisseurs. Is it, then, the fish that these good folk are afraid of demoralizing? Or are they afraid of the wine getting into the figure-head?"

In the case of the christening of the "St. Louis" it was Mrs. Cleveland, and not the President, whom these fanatics permitted themselves to attempt to rebuke by means of a bottle of water. As a matter of course she behaved like a lady, and took no notice of the suggestion, and the thing would never have been heard of if it had not been for the omnipresent reporter. Mr. Cramp supplies the bottle of wine on these occasions, we believe, and those who object should tackle him, and not Mrs. Cleveland.

E. SHIPPEN.

# NAVAL AND MILITARY NOTES.

## NOTES AND DATA ON NAVAL AND MILITARY MATÉRIEL AND ALLIED SUBJECTS.

*It is the intention to collect and publish in this department of the "United Service" all information obtainable from current publications and other available sources concerning ships, guns, armor, explosives, small-arms, military and maritime affairs, and kindred subjects. As the data are derived largely from unofficial sources, strict accuracy cannot be expected; but all reports will be carefully examined and compared with others on the same subject, and it is hoped, by this means, to attain fairly correct results. Erratum notices will be published whenever errors are discovered in data previously given. As the development of the present plans for collecting information progresses, it is hoped to secure fuller and more authentic reports.*

ABBREVIATIONS USED IN THE NOTES.

*b.l.* = *breech-loading guns of ordinary (not rapid-fire) type.*
*cm.* = *centimetre.*
*f.a.m.l.* = *fore and aft midship line.*
*I.H.P.* = *indicated horse-power.*
*l.w.l.* = *load water-line.*
*m.g.* = *machine gun.*
*mm.* = *millimetre.*
*pr.* = *pounder (as 6-pr.).*
*r.c.* = *revolving cannon.*
*r.f.* = *rapid-fire.*
*r.f.g.* = *rapid-fire gun.*

### HEAVY GUNS.

BETHLEHEM BREECH MECHANISM FOR HEAVY GUNS.—The Bethlehem Company has recently patented a breech mechanism for heavy guns. It closely resembles the Fletcher mechanism. (See description of the mechanism of the United States naval 13-inch B.L.R., given in the NOTES two months since.) Its principal points of difference are that the operating parts are externally applied (*i.e.*, the shafts, bearings, worm, and gear are not partially contained in the metal of the breech, but are in rear or above it); and that the worm is differently cut (here it reverts towards the Fletcher rapid-fire model). The worm is therefore the only point that needs description. It is, as in the Fletcher mechanism, on the vertical shaft abreast the axis of the plug. It is first cut as a true worm. Then, for a portion of its circumference, the threads are cut up by longitudinal slots (parallel to the axis of the worm), leaving diamond-shaped studs on this part of the worm, instead of a thread. This diamond-studded portion of the worm can, therefore, act as a worm or gear, the studs in the latter case performing the offices of withdrawal or entrance of the plug exactly as do the longitudinally-cut threads of the worm in the Fletcher R.F. breech mechanism. (See Fletcher R.F. Breech Mechanism, under "Rapid-Fire, Machine, and Field Guns," in this month's NOTES.)

SIX-INCH UNITED STATES NAVAL NICKEL-STEEL GUN.—A 6-inch nickel-steel gun was recently finished at the Washington Navy-Yard. It is built upon the Sellers system, which will admit of its being disassembled and a new tube inserted when the present one is worn out. It will be given very exhaustive tests in order to determine the value of the system of construction and

also that of nickel-steel as a gun-metal. A special form of furnace is employed in assembling and disassembling the gun.

BRYAN MULTICHARGE GUN.—A new multicharge gun has been invented by a Mr. Bryan, of Birmingham, Alabama. No reports of results have been received.

STRAUSS SIGHT FOR HEAVY GUNS.—A test of a new sight for heavy guns recently took place at Indian Head. It is the invention of Ensign Joseph Strauss, U.S.N., of the Naval Ordnance Bureau. It is to be employed on guns mounted in turrets. It consists of a telescope and two hydraulic cylinders connected by a rubber tube, and which contain a fluid such as glycerin and water. In each cylinder is a piston; the piston of one cylinder is attached to the gun (or carriage) and moves with it; the piston of the second cylinder supports one end of the telescope and is given motion by the liquid, which in turn receives it from the piston on the gun. No report of the results of the test are at hand.

KRUPP'S WORKS: ORDERS FOR GUNS.—The telegraph reports that orders for guns from all parts of Europe continue to overwhelm the Krupp gun-works at Essex, the immense resources of which are severely taxed to fill them within the required time.

BRITISH NAVAL GUNS: NUMBER OF MUZZLE-LOADERS.—Admiral-of-the-Fleet Sir T. Symonds writes to the *Times*, saying, "I see no mention made in Parliamentary debates or returns, or even elsewhere, as to our guns, the state of which is so alarming, and must end in disaster if at war with France and Russia, or France alone. We mount 300 and odd muzzle-loaders in our obsolete vessels and only 96 breech-loaders in our 24 modern armored battle-ships and 4 in the *Hero* and *Conqueror*: total 100 heavy guns; besides 32 in the altered obsolete *Devastation*, *Thunderer*, etc.: total, 132 heavy guns (for names and particulars see 'Brassey'). Thus we have only 132 best guns, B.L., to 300 and odd M.L., the worst of guns. This is most deplorably dangerous. The French already mount about 202 breech-loading heavy guns, and the Russians 109, total 311, to our 132! All their other guns are breech-loaders; ours are muzzle-loaders!"—*London Times*.

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## RAPID-FIRE, MACHINE, AND FIELD GUNS.

FLETCHER RAPID-FIRE BREECH MECHANISM.—The first heavy gun fitted with the Fletcher rapid-fire breech mechanism, a 6-inch, was tried at Indian Head during the summer of 1894. The results were highly satisfactory, refractory cartridges being easily and quickly extracted with only one hand on the lever, and the mechanism worked well in all respects.

The breech-plug is cut with six equal sectors of interrupted screw threads, and is supported by a heavy steel ring or collar, the outside periphery of which is slightly tapered and fits in a corresponding recess cut in the face of the breech. This ring is locked in the gun by means of an automatic locking-pin located in the ring on top. The ring is hinged on the right side of the gun. Around the cylindrical surface of the plug at its rear end is a circumferential rack the threads of which have a pitch of 45°. This rack is about one-seventh of the circumference of the plug in length and about half as broad. The plug has also an L-shaped slot in which the locking-pin travels and engages. The operating lever and the driving gear—which is securely bolted to it—have a common pivot on the hinge-bolt of the plug. The driving gear includes only about three-quarters of a circle, the remainder of the wheel being cut away and partly hollowed out. The gear which is cut upon it is of two kinds, which together occupy about one-half the circumference, the lever fastenings taking up the other quarter. One part of the gear is spiral (worm type) to fit the gear on the rear edge of the plug, and the other is normally cut to match the threads of the interrupted screw. With the breech closed, the pulling of the lever—which in this position lies across the face of the breech—first revolves the plug, the spiral

gear of the driving-wheel engaging with the rack on the rear edge of the plug; when the plug is turned sufficiently to release its threads from those of the screw-box, the pressure of the gear on the rack starts the plug to the rear and engages the normally-cut gear with the threads of the interrupted screw on the plug, and this causes the plug to be quickly drawn out of the screw-box. When the plug is entirely withdrawn, a further movement of the lever turns the collar, plug, and all clear of the breech to the right. It will thus be seen that one continuous motion of the lever from left to right unlocks, withdraws, and swings the plug to the right. To close the breech it is only necessary to swing the lever from right to left. The action is direct, without intermediate gearing. The extractor is a thick piece of steel, the toes of which rest under the rim of the cartridge-case, and the other end against a cam formed on the back edge of the driving gear (this is the part referred to as "partly hollowed out"). The curve is of such a shape that until the case is withdrawn one-quarter of an inch the speed of extraction is exceedingly slow; from this point, however, the speed is greatly increased, caused by the tail of the extractor sliding down the cam as the lever is swung back. The use of this cam gives almost unlimited power to start the empty case. The firing mechanism, whether percussion or electric, is contained in a case which is quickly and easily put in or removed, so that the change from one method of firing to another can be readily accomplished, and injury to or failure of any part can be remedied by the insertion of a spare case without materially slackening the rapidity of fire. An extremely simple safety-catch under the head of the firing-pin prevents its premature release. The compactness and beautiful simplicity of the Fletcher breech mechanism must be seen to be appreciated. It is the strongest, simplest, best protected, and least liable to get out of order of any rapid-fire mechanism yet devised, and there is apparently very little room for improvement. The total number of parts, exclusive of three small screws, but including plug, collar, lever, hinge-bolt, safety-catch, extractor, etc., is but *fourteen*. The only spring is that of the firing-pin in the percussion firing-case.

SEABURY RAPID-FIRE BREECH MECHANISM.—The Seabury rapid-fire breech mechanism belongs to the multiple-lever class of which the Canet, Armstrong, and Dashiell are well-known examples. A satisfactory description cannot be given without the aid of plates, and therefore only the principal features will be considered. A bracket bolted to the right side of the breech supports the common pivot of plug-tray, hand-lever, and plug-retractor; it also supports a second pivot-centre, inside the first, for the extractor arm. Above the plug, on the face of the breech, is bolted a horizontal rail of T-section, on which slides a block carrying a geared rack on its under surface. This block is connected to a short arm on the operating lever by a link. A circumferential gear extends about one-fifth the way round the rear edge of the plug and works in the rack of the sliding block. The manipulation of the mechanism is as follows: The operating lever, which turns about a vertical axis, is drawn to the rear and to the right through an angle of about 270°. As it starts to the rear the block-link pushes the block to the left, and the movement of the rack causes the plug to turn in the same direction. As the plug becomes completely unlocked the arm driving the rack-link passes a dead-point. A pin on the under side of the hand or operating lever then brings up against the retractor lever and draws the plug to the rear and upon the plug-tray. A further motion of the lever turns the plug-tray to the rear and right clear of the breech. Just as it gets clear, and before reaching its final position, a pawl pivoted on the extractor arm catches in a notch on the collar of the operating lever and, pulling on the extractor arm, draws out the extractor and extracts the empty shell. A reverse motion of the lever enters the plug and closes and locks the breech, but the intervention of a locking-bolt is necessary to force the retractor arm to move back, as the stop which drew it outward only rested against the inside edge.

The Seabury breech mechanism is said to be exceedingly satisfactory in its action.

NEW TYPE CANET RAPID-FIRE BREECH MECHANISM.—This mechanism is of very novel design. The breech is closed by a sphere with a cylindrical hole bored through it of a diameter slightly greater than that of the head of the cartridge. The front half of the seat of this spherical block is formed in the metal of the gun; the rear half in the front side of a heavy ring screwed into the breech behind the sphere. The sphere revolves about a horizontal axis on a shaft extending through the right side of the gun and carrying a straight lever on its outer end. When the lever is vertical the breech is closed; when horizontal, it is open, the axes of the holes through the sphere and ring then coinciding with each other and with the axis of the bore. In order to fit closely to the surface of the sphere the base of the cartridge-case is made concave. The firing-pin is carried on a lever with one right angle and one obtuse angle bend, the end next to the right angle forming the pin. This lever is pivoted in the obtuse angle, and is wholly enclosed in the metal of the sphere. As the firing-pin cannot strike the primer-cap until the breech is wholly closed, a premature fire cannot happen. The firing-pin lever is operated by a lanyard and external lever, and a sliding bolt or block extending through the left side of the gun. This block or bolt is pressed forward against the firing-pin lever by a spring. It is kept cocked when working the piece, and is held in that position by the external or detent lever. Pulling the lanyard trips the detent, and the sliding-block is pushed in against the firing-pin lever. The block is automatically cocked by the recoil, a wedge-shaped piece being forced under a flange on its outer end. If necessary, recocking is performed by hand with a special lever. The extractor is fork-shaped, and is operated by a cam underneath the plug, and this cam is, in turn, driven by a projection on the under surface of the plug. The first part of the extraction is very slow, but the speed increases rapidly as the plug nears the "open" position.

BOFORS 12-CENTIMETRE R. F. G. (NEW TYPE), WITH ARMORED MOUNT.—The Bofors Company has brought out a 12-cm. rapid-fire gun with a breech mechanism of very novel design. It has an armored centre-pivot mount, and is intended for use in a fortress or some other form of land defense. Its details are: Exact calibre, 12.16 cm.; length, 44.4 calibres; weight of gun alone, 3.100 kilogrammes (6832 pounds); there are 36 lands and 36 grooves; width of lands, 3.5 mm. (0.14 inch); depth of grooves, 1 mm. (0.04 inch); twist of rifling, 1 in 60 to 1 in 30; weight of trunnion jacket, 1150 kilos (2535 pounds); weight of armored carriage, 2440 kilos (5378 pounds); total weight of gun and mount, 6690 kilos (14,745 pounds). The gun itself is composed of an interior tube, an anterior jacket and a posterior jacket. It is mounted in a cradle or trunnion jacket, within which it slides during recoil, and which carries underneath an hydraulic cylinder and piston, in which the pressure remains constant throughout the recoil, while a spiral spring above, when the recoil is checked, returns the piece automatically to the front. The breech is on the interrupted-screw principle. The breech-block is in shape the frustrum of an ogival. The hinge of the block is on the left side of the gun and in the centre of the horizontal circle which includes as a part of its arc the extreme right-hand element of the ogival-shaped plug, the radius of curvature of the ogival being equal to the distance of any point of this element to the centre of the hinge. The plug is operated by a lever. On account of its shape, no movement of withdrawal *straight to the rear* is required, it being free to swing out of the screw-box on its carrier-hinge as soon as the threads are disengaged. The first part of the movement of the lever withdraws, cocks, and locks the firing-pin. Then the teeth on the back of the lever engage in a rack on the plug, and give it one-eighth of a turn about its axis, disengaging its threads from those of the screw-box. A further

movement turns the plug to the left, clear of the breech. Reversing the lever closes and locks the breech and unlocks the firing-pin. Extraction of the empty cartridge-case is performed automatically by an extractor without violence. In the event of a cartridge jamming, a device enables the breech to be opened without bringing the extractor into action. The gun is fitted with the usual Bofors mechanism for preventing danger from hang-fires. The rear of the cartridge-case, instead of being flat, has a hollow nearly 4 mm. (0.16 inch) deep, and this is, of course, effaced by the pressure of the gases on firing. Until this is done, and the firing-pin thrown back, the breech cannot be opened, save by first withdrawing the firing-pin by hand. This "cupping" of the cartridge-cases does not prevent their being used at least ten times, as the hollow or cup can be easily remade. The projectiles, common shell, armor-piercing shell, shrapnel, and canister, each weighing 20 kilogrammes (44 pounds), are fixed in the cartridge-cases. The latter weigh 4.8 kilos (10.5 pounds), and the powder capacity is 6 4 litres. The armored protection consists of a steel cylinder, open behind, and pierced in front with an aperture sufficiently large to allow of an elevation of 15 degrees and a depression of 7 degrees. The thickness of the walls of the cylinder is 3.9 inches. The mount rests on a turn-table, so arranged that the central pivot takes the greater part of the weight, the rest being taken on steel balls. Four men are sufficient to serve the gun. Five shots were fired in 23 seconds, and 89 during the test. The best result obtained with the various sorts of powder tried was 831 metres (2726 feet) per second, with a pressure of 2290 atmospheres (33,663 pounds per square inch). This powder did not give uniform results, however, and another giving a velocity of 729 metres (2392 feet), with a pressure of 2210 atmospheres, was found most reliable.

HOTCHKISS 2-POUNDER R.F. MOUNTAIN-GUN.—The calibre of this piece is 42 mm. (1.65 inches), and it is intended to be taken to any position accessible to infantry. Simplicity of mechanism and ease of operation have been aimed at. The body of the gun is 25 calibres in length, made of a single forging. The breech-block is a solid, prismatic piece of steel, and moves horizontally in a mortise cut completely through the breech. The forward face is perpendicular and the rear one slightly inclined. The left end is bored to form a prolongation of the chamber when the breech is open. The breech-block is held in place by a locking-screw, the threads of which are cut away for about 100 degrees, so that the block is locked by a quarter of a turn of the handle. The firing-pin is in two sections, one in the breech-block and one in the breech; the general direction is downward and to the front, but the sections are not exactly in line with each other. The extractor is on the lower side of the chamber, and is worked by a stud on the breech-block. The fixed ammunition consists of a brass case containing 175 grammes of large grain powder or 90 grammes of French B.N. smokeless. Gun, carriage, and limber—the latter loaded with 112 rounds—weigh only 530 kilos (1166 pounds).

MAXIM SHOULDER-GUN.—"On the occasion of Mr. Maxim's experiments at Erith with bullet-proof plates, an opportunity was afforded of examining a new adaptation of his machine gun. This proved to be a weapon weighing only 20 pounds,—which may be reduced to 17 pounds,—and capable of firing English service .303 cartridges at the rate of about 620 per minute. The action differs but slightly from that of the ordinary Maxim gun. The outside spring-box is not employed, while the outside handle is considerably modified, and the feed-box is brought so close to the side of the gun as to make it very compact and light. The water-jacket is replaced by a perforated steel or aluminum tube, which prevents the heated barrel from touching anything. It has been found that when 100 rounds are fired at the highest possible speed with one pull of the trigger, a temperature of 500° F. is reached, but it is thought that 250 rounds could be fired continuously

without dangerously heating the barrel. The chief peculiarity of the gun is, however, the fact that it is not intended to be fired from a carriage, but from the ground, either by supporting it on the cartridge-blocks or by resting the fore end on a prop, the cartridge-belt being placed on the ground. A shoulder-piece is provided, and the weapon is pressed to the shoulder like the stock of a rifle, the slight pulsations when firing following each other so rapidly as to give a constant, but gentle, push. The ammunition is furnished in boxes of 50, as well as in those of 100, such as were used in the Matabele war with the ordinary Maxim gun."—*Arms and Explosives.*

TRIAL OF MACHINE GUNS FOR THE UNITED STATES NAVY.—The competitive trial of machine guns for the United States navy, which took place in July and August, 1894, has not definitely settled the question as to which is to be selected for the navy. Two of the members of the trial board reported in favor of the Maxim-Nordenfeldt and the third in favor of the Gatling. The report dwells at length on the defective character of the ammunition, and it is the opinion of the board that a more exhaustive trial should be had, during which improved American Gardner, Colt, and Robertson machine guns should be tested. Enormous pressures were developed by the smokeless powder used in the guns without corresponding velocities. In some instances a pressure of 60,000 pounds per square inch was obtained. This pressure resulted in some peculiar accidents unknown with the old type of black powder. The pressure was so great on a number of occasions as to blow primers out of the heads of cartridges, forcing the firing-pin back, crushing the spring, and letting the powder-gas escape, thereby damaging the mechanism. In other instances the powder-gas was forced around outside of the cartridge-case, also to the injury of the mechanism. Frequently the stress upon the cartridge was so great that its head and shoulder were torn off, leaving a portion of the case in the chamber to be telescoped by the next cartridge forced in, thus jamming the piece. The Chief of the Bureau of Ordnance recommended to the Secretary of the Navy (and the recommendation was approved by the latter) as follows: "Bureau recommends that owners of the Gatling and the Maxim be invited to construct guns of 6 mm. (0.236 inch) calibre to be tested in competition. As the agents of Accles's improved Gatling have requested that the new Accles gun of 6 mm. calibre be tried, it is further recommended that each of the exhibitors be permitted to present a gun of 6 mm. calibre under the same conditions as the Gatling and Maxim, the date of such trial to be at as early a day as the guns can be manufactured."

## SMALL-ARMS.

RUSSIAN MAGAZINE RIFLE.—The following description of the Russian infantry arm, the Mossin (Mosin or Mouzin—Mossin said to be correct), is from *Arms and Explosives*, and is derived from an article in the *Rivista di Artiglieria e Genio* by Lieutenant-Colonel J. Viglezzi, who is indebted for his facts to Captain Jurgow, of the Russian staff.

"The Mossin rifle is the invention of a French officer, and was adopted by Russia at the end of 1891. Since then it has been manufactured at Chatellerault in large quantities, and is now replacing the old Berdan in the hands of the troops. The calibre of the Mossin is 7.6 mm., and it is provided with a 5-cartridge magazine beneath the chamber. When the magazine is empty it can be used as a single-loader, but it is not provided with a cut-off. The cartridges are rimmed, and are held together by a clip like that of the Mannlicher, by which they can be inserted in lots of five into the magazine from the top of the breech, the clip being forced upward as the cartridges are pressed in. There is a closed base to the magazine. The barrel is protected by a movable wooden sleeve, and during the firing the fingers of the left hand are inserted in two long grooves in the fore part. There are four grooves in the rifling, 0.15 mm. deep, with a right-hand twist, 1 in 24 cm., the lands being half as wide

as the grooves. The leaden bullets have a mantle of "mailleschort," and weigh 18.6 grammes, while the charge is 2.2 grammes of smokeless pyroxiline. The cartridge weighs 25.5 grammes, the packet of five weighing 137 grammes. With the bayonet, the rifle weighs 4.3 kilos (9.46 pounds), without it, 3.99 kilos (8.78 pounds); its length with the bayonet is 1.73 metres (5.68 feet), without it, 1.29 metres (4.23 feet)."

It is stated that Russia has now enough of the new rifles to enable her to call in large quantities of the old 0.429 Berdan, and that before the end of 1895 the active army will be entirely supplied.

DUNI STRAIGHT-PULL RIFLE.—This rifle is the invention of Major A. Duni, of the Italian Artillery. The bolt consists of two parts screwed together. The front piece has studs on its forward end which, during the latter part of its travel to the rear, move in the bolt-guides. Over the bolt fits a sleeve carrying the lever or bolt-handle. It has a short movement of translation over the bolt, during which, by means of spiral cams on bolt and sleeve, the former is made to revolve sufficiently for locking and unlocking it. In opening the breech, when the sleeve reaches the rear end of its travel on the bolt, the latter is unlocked (as the studs on the forward end are in position to slide to the rear in the bolt-guides), and a further pulling of the bolt-handle draws the bolt straight to the rear. A toe on the rear end of the firing-pin, working on a spiral cam on the bolt, prevents the pin from turning, and the rotary movement of the bolt causes the pin to be drawn to the rear, cocked and locked. The empty shell is thrown out just before the bolt clears the opening of the magazine to admit the new cartridge. Pushing the bolt-handle forward carries the fresh cartridge ahead of the bolt and sends it home. The reverse rotary movement of the bolt then locks it and unlocks the firing-pin.

NEW WESSON REVOLVER.—Mr. D. B. Wesson has recently patented a solid-frame, side-swing revolver, somewhat resembling in appearance the present army and navy Colt. Its interesting features are the methods of locking the trigger and cylinder. The cylinder is carried on the usual yoke, and swings out to the left about an axis formed by the pin constituting the lower arm of the yoke. The trigger has its pivot on the rear end of this pin, and, when the cylinder is turned out, a partial sleeve, which does not extend all the way around the pin, is forced to the rear and locks the trigger firmly. The cylinder is locked and held in place, when in position for firing, by its own pivot, which is a sliding-pin, the rear end of which snaps into a recess or socket when the cylinder is pressed back into the frame, and it is kept up to its work by a surrounding spiral spring. The cylinder is locked from turning by a pointed stud on a lever which is pivoted at its forward end and lays along the top of the revolver frame over the cylinder space, the stud extending through the frame to engage in the stud recesses of the cylinder. When the hammer moves back the rear end of the lever is lifted by a projection on the back of the former, thus drawing the stud out of the recess in the cylinder and allowing it to revolve. When the projection on the hammer releases the lever it springs down again and locks the cylinder in its new position.

RIOT GUNS.—"When, in the course of last winter, it was unfortunately found necessary for British troops to fire on a riotous mob, it was suggested that the modern long-range, small-bore military rifle was a very unsuitable weapon for the purpose. In some cases, owing to the soldiers aiming too high, persons were wounded at a considerable distance from the riotous assemblage. When the Royal Irish Constabulary have to deal with such matters they use buckshot,—a circumstance which gave the late Mr. W. E. Forster his unpleasant and undeserved nickname. Recent experiences in the United States have shown that it is not only in the effete civilizations of the East that the last test of military obedience, as Macaulay called it, is at times necessary to the safety of the State.

It was probably owing to a prophetic intuition of the necessity of suppressing riotous mobs by force of arms that the Winchester Repeating Arms Company not long ago brought out weapons eminently suitable for use by police or soldiers in such work. These are shotguns, bored for buckshot, with barrels 20 inches long, with a capacity of six cartridges, each containing nine buckshot. They are made with lever action, or with the fore-end action of their '93 model, and at 40 yards give a spread of 4 feet."—*Arms and Explosives.*

## PROJECTILES.

RUSSIAN "MAGNETIC" OR SECRET-PROCESS ARMOR-PIERCING SHELL.—The design of this shell and the process of manufacture are strictly guarded secrets. It is supposed that a cap of soft iron or steel is electrically soldered or welded to the point of the projectile. The exact shape of the cap is unknown, but it is thought to be comparatively thin (about 0.5 inch) and of the same general shape as the point of the ogival. As in the case of all "secrets," the observers (at the recent trials) were probably intentionally misled by the Russian authorities, whose sole object was doubtless to create as strong an impression of superiority as possible. The tests took place at the Okhta proving ground, near St. Petersburg, and a number of foreign officers and representatives were present by invitation, but the projectiles were carefully concealed from their view. The plates fired against were three in number, two of which were 8 feet square and 6 inches thick, and the other a curved plate 8 feet square and 10 inches thick. All three were Harveyed. The 10-inch and one 6-inch plate were made by Brown and the other 6-inch by Cammell. Each of the 6-inch plates were attacked by four "magnetic" shells, the first fired normally to the plate, the second at an angle of 15 degrees, the third at an angle of 20 degrees, and the fourth at an angle of 25 degrees. The first three shells passed through the Brown plate, but the fourth was broken up, though it got through. The normal shot at the Cammell plate went through uninjured; the one striking at 15 degrees got through but was broken up; the one at 20 degrees only penetrated about 3.3 inches before breaking up, and the last shot at 25 degrees gave about the same result. The gun used was a 45-calibre 6-inch. The weight of the ordinary projectile was 90 pounds, and of the shell with the cap about 93. The velocities used against the 6-inch plates were about 1850 f. s.; against the 10-inch, 2350 for the "magnetic," and 2400 for the ordinary shell. The difference in weight made the energies practically equal. No cracking of the Cammell plate was caused by the oblique shots, though being unsupported latterly, there was some tearing of the metal. This plate contained no nickel or other alloys. A couple of Holtzer shells without caps were also fired at the plates, one normally, the other obliquely. The normal shells got through the plates, but the oblique ones failed to do so. The 10-inch curved plate was pierced by the "magnetic" shells when the angle did not exceed 8 degrees or 10 degrees from the normal, but the ordinary Holtzer projectiles failed to get through. After receiving seven shots this plate was still free from cracks.

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From lack of space a description of several important armor tests has been deferred until next month.

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## GUNPOWDER AND EXPLOSIVES.

COMPETITIVE TRIAL OF SMOKELESS POWDERS IN ROUMANIA.—*Arms and Explosives* reports a recent competitive trial of smokeless powders in Roumania. It took place under the direction of a government commission in April, 1894. The following makes were represented: Troisdorf, Schwab (Austrian government powder), Rottweil, Foerster, and Pefca. Ten shots were fired in each test, and the velocities taken at 25 metres from the muzzle.

*Test No. 1.*—The cartridges were exposed for 8 days to a temperature of 7° to 13° C. and fired immediately after being taken out of the cooling chamber. The results were:

| | Kind of Powder. | | | |
|---|---|---|---|---|
| | Troisdorf. | Schwab. | Rottweil. | Foerster. |
| Mean velocity (metres) . . . . . | 698.9 | 694.6 | 703.0 | 711.1 |
| Variation of velocity from the mean . . . | 12.6 | 33.1 | 11.3 | 25.6 |
| Mean pressure (kilos per sq. cm.) . . . . | 3648.0 | 3585.0 | 4003.0 | 4500.0 |

The results with the Pefca powder were uninteresting as it exploded at such a low temperature. (See "Further Tests" below.)

*Test No. 2.*—The cartridges were heated 8 hours a day for 8 days to 70° C. and then cooled to normal. The results were:

| | Kind of Powder. | | | |
|---|---|---|---|---|
| | Troisdorf. | Schwab. | Rottweil. | Foerster. |
| Mean velocity (metres) . . . . . | 693.8 | 697.6 | 711.3 | 711.7 |
| Variation of velocity from the mean . . . | 6.1 | 22.5 | 13.5 | 17.3 |
| Mean pressure (kilos per sq. cm.) . . . . | 3441.0 | 3413.0 | 3798 0 | 3457.0 |

*Test No. 3.*—The cartridges were exposed to the weather on the ground in the open for 8 days. The results were:

| | Kind of Powder. | | | |
|---|---|---|---|---|
| | Troisdorf. | Schwab. | Rottweil. | Foerster. |
| Mean velocity (metres) . . . . . | 692 3 | 700.5 | 708.4 | . . |
| Variation of velocity from the mean . . . | 6.1 | 19.3 | 11.6 | . . |
| Mean pressure (kilos per sq. cm.) . . . . | 3610.0 | 3707.0 | [1] | . . |

It will be seen that the Troisdorf powder, while not giving as high velocities as the others, was more regular in its action and showed considerably less variation from the mean. It was apparently unaffected by the various sorts of exposure.

*Further Tests.*—The Troisdorf powder also passed successfully through the further tests; it alone had no volatile matter, such as camphor or ether, in its composition. Its explosion point, as determined by raising the temperature of an oil-bath, in which 0.5 gramme of each of the powders was suspended in a test-tube, was 175° C. That of the others was: Schwab, 174° C.; Rottweil, 171.5° C.; Foerster, 172° C.; Pefca, 147° C. Troisdorf withstood the firing of a bullet into a case of powder without injury, while the others were easily ignited. As a result, the Roumanian government has given a first order to the Rhenisch Westfälische Sprengstoff Aktien Gesellschaft for a quantity of Troisdorf powder, and it is expected that this will be followed by regular government contracts.

[1] The mean pressure for the Rottweil powder was not determined. The maximum was over 4500 kilos and the minimum 3580 kilos.

Cannonite.—This is made by the War and Sporting Smokeless Powder Syndicate, at Trimley, near Felixstowe England. It is a nitro-cellulose powder, and gun-cotton is the principal ingredient. This is mixed with solvents which leave it in a black plastic mass. It is then forced through perforated plates, the holes differing in size according to the intended use. The strings or threads are dried and broken up in a granulating press. A sifting machine then removes the dust and all unduly large or small particles. The grains are then finished in a revolving glazing barrel.

L. S. Van Duzer,
*Lieutenant U.S.N.*

# SERVICE SALAD.

### The West Pointers.

*(From the Washington Evening Star.)*

THEY ARE NO LONGER IN THE ASCENDANT IN THE ARMY.

An examination of the Army Register for 1895, just issued by the adjutant-general, shows that out of 2139 officers on the active list there are only 392 graduates who have risen above the rank of first lieutenant. The total number of West Pointers is 1230, but 830 of these are subalterns. In other words, although 57 per cent. of the officers on duty are graduates of the Military Academy, only 18 per cent. have been promoted more than one step since they "doffed the gray and donned the blue," so that, practically, the army is now dominated by officers who do not bear the aristocratic stamp of "The Point."

Two of the three major-generals, Schofield and McCook, are West Pointers. The other, Nelson A. Miles, originally entered the military service of the United States as a captain in the Twenty-second Massachusetts Volunteers. When General Schofield retires next September General Miles will be the senior major-general, and, as such, will probably succeed to the command of the army. That, however, does not necessarily follow, although there is a general but erroneous belief that it does. Under an old regulation, which is still in force, an officer cannot place himself on duty by virtue of his commission alone. He must be assigned to duty by competent authority.

General Miles, therefore, cannot succeed General Schofield as "major-general commanding the army" unless specially assigned to that position by orders from the War Department. It would be competent for the President to assign another officer to that duty, though it is not likely that he will do so.

The six brigadier-generals are equally divided between graduates and civilians, Ruger, Merritt, and Forsyth being West Pointers, while Brooke, Wheaton, and Otis do not possess that distinction. General Wheaton originally entered the army March 3, 1855, as first lieutenant in the Fourth (now First) Cavalry, which was organized under an act of that date. He has been continuously in service nearly forty years. Generals Brooke and Otis were appointed lieutenant-colonels of infantry in 1866, having previously served with distinction as brigadier-generals of volunteers.

Of the ten general officers (brigadiers) who are heads of staff departments only, four are graduates,—namely, the adjutant-general, commissary-general, chief of engineers, and chief of ordnance. The inspector-general's department, the judge-advocate-general's department (formerly called the bureau of military justice), the quartermaster's, medical, and pay departments, and the signal corps are presided over by officers who have not the significant M.A. opposite their names in the Army Register. The chief signal officer began his military career by carrying a musket as a private in the Nineteenth Massachusetts Volunteers. The inspector-general, judge-advocate-general, quartermaster-general, and surgeon-general made their first military ventures in 1861 as lieutenants, while the paymaster-general commenced as an additional paymaster with the rank of major. The other officers of the staff departments are classed as follows:

Graduates of West Point, 18 colonels, 26 lieutenant-colonels, 46 majors, 77 captains, and 62 lieutenants.

Appointed from civil life, 12 colonels,

24 lieutenant-colonels, 94 majors, 98 captains, and 38 lieutenants.

Promoted from the ranks, 1 lieutenant-colonel, 2 majors, 1 captain, and 2 lieutenants.

These figures show that out of 501 staff officers, exclusive of heads of bureaus, 229 are graduates, 266 are civilian appointees, and 6 rose from the ranks.

### FIGHTING PARSONS.

Although it is a matter of record that graduates of the Military Academy have become ministers of the gospel (Leonidas Polk, for example, sometime Bishop of Louisiana and Confederate general, Rev. De Shon, a Catholic priest, and Dr. Francis Vinton, for many years rector of Trinity Church, New York), none of the thirty post chaplains are West Pointers, but two of them served as infantry officers, and eight were enlisted men of volunteers during the late war, so that one-third of the chaplains are fairly entitled to be considered "fighting parsons."

In the cavalry arm of the service 3 colonels, 2 lieutenant-colonels, 1 major, 83 captains, and 220 lieutenants are graduates; 7 colonels, 5 lieutenant-colonels, 18 majors, 37 captains, and 24 lieutenants are from civil life, and 3 lieutenant-colonels, 11 majors, 1 captain, and 15 lieutenants were promoted from the ranks.

In the artillery arm, which, like the engineer corps and ordnance department, is regarded in a sort of scientific light, West Point is better represented. Four of the five regiments are commanded by graduates, and one by a civilian appointee; all the lieutenant-colonels, 5 of the majors, 23 captains, and 182 lieutenants are West Pointers; 10 majors, 30 captains, and 8 lieutenants were appointed from civil life, and 7 captains and 1 lieutenant rose from the ranks. For some time past vacancies in the artillery arm have been reserved for graduates, which explains the circumstance that, out of 191 lieutenants, all but 9 are West Pointers. It is five years since an enlisted man received a commission in an artillery regiment, though during that period, many artillerymen have been promoted from the ranks and assigned to the infantry.

### PROPORTION OF WEST POINTERS.

In the infantry arm graduates above the rank of lieutenant are scarce, there being only 6 colonels, 3 lieutenant-colonels, 1 major, and 75 captains, while the number of lieutenants is 374. Those appointed from civil life are 19 colonels, 18 lieutenant-colonels, 13 majors, 150 captains, and 77 lieutenants. The rank and file of the army are represented by 4 lieutenant-colonels, 11 majors, 27 captains, and 97 lieutenants.

The proportion of West Pointers in each grade above that of first lieutenant in the combatant branches of the army is as follows: colonels, 32½ per cent.; lieutenant-colonels, 25 per cent.; majors, 10 per cent.; captains, 31 per cent.

At the Military Academy there are seven permanent professors, six of whom are graduates. The seventh, the chaplain and professor of ethics, is not a graduate. The professor of law is detailed from the army under a special provision of law. At present that office is filled by a lieutenant-colonel of the judge-advocate-general's department, who was promoted from the ranks, having served as private, bandsman, and quartermaster-sergeant. If any cadet, some thirty-seven years ago, had predicted that a young German, then playing in the band of the Ninth Infantry, would one day become a lieutenant-colonel, and be assigned to duty as professor of law at the high-toned Point, he would certainly have been hazed.

### VETERANS OF THE WAR.

The term "appointed from civil life," used in the above statement, though strictly correct, is somewhat misleading, as it conveys the idea that when the appointees received their commissions as regular army officers they were green civilians. As a matter of fact, 46 per cent. were seasoned veterans, having taken part in a war compared with which the war of 1812 and the Mexican War were merely a series of skirmishes. Out of 723 officers reported as appointed from civil life, 333 served in the volunteer army,—156 as commissioned officers and 177 as enlisted men. Many of those who received appoint-

ments in the regular army on its reorganization in 1866 had commanded regiments, brigades, divisions, and even army corps, under Grant or Sherman, and it was not exceptional for majors, lieutenant-colonels, and colonels of volunteers to accept second lieutenancies in the regular establishment. After nearly thirty years' service, some of these volunteer field officers have not advanced beyond the grade of captain, and it is probable that the retired list will overtake them before they can get another step.

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**Carmen Bellicosum.**

*(From the New York Sun.)*

In their ragged regimentals
Stood the old Continentals,
Yielding not,
When the Grenadiers were lunging,
And like hail fell the plunging
Cannon shot;
When the files
Of the Isles,
From the smoky night encampment, bore the banner of the rampant
Unicorn,
And grummer, grummer, grummer, rolled the roll of the drummer,
Through the morn!

Then with eyes to the front all,
And with guns horizontal,
Stood our sires;
And the balls whistled deadly,
And in streams flashing redly,
Blazed the fires;
As the roar
On the shore
Swept the strong battle-breakers o'er the green-sodded acres
Of the plain;
And louder, louder, louder, cracked the black gun-powder,
Cracking amain!

Now like smiths at their forges
Worked the red St. George's
Cannoniers;
And the "villainous saltpetre"
Rung a fierce, discordant metre
Round their ears.
As the swift
Storm drift,
With hot, sweeping anger, came the horse-guards clangor
On our flanks;
Then higher, higher, higher, burned the old-fashioned fire
Through the ranks!

Then the old-fashioned Colonel
Galloped through the white infernal
Powder cloud;
And his broad sword was swinging,
And his brazen throat was ringing
Trumpet loud.
Then the blue
Bullets flew,
And the troopers' jackets redden at the touch of the leaden
Rifle breath;
And rounder, rounder, rounder, roared the iron six-pounder,
Hurling death!

GUY HUMPHREY MCMASTER.

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**The President's Proclamation.**

JOHN BROWN SONG.

JOHN BROWN died on a scaffold for the slave;
Dark was the hour when we dug his hallowed grave;
Now God avenges the life he gladly gave.
Freedom reigns to-day!
Glory, glory hallelujah!
Glory, glory hallelujah!
Glory, glory hallelujah!
Freedom reigns to-day!

John Brown sowed and his harvesters are we;
Honor to him who has made the bondmen free!
Loved evermore shall our noble Ruler be—
Freedom reigns to-day!
Glory, etc.

John Brown's body lies mouldering in the grave!
Bright o'er the sod let the starry banner wave;
Lo! for the millions he periled all to save—
Freedom reigns to-day!
Glory, etc.

John Brown lives—we are gaining on our foes—
Right shall be victor whatever may oppose—
Fresh, through the darkness, the wind of morning blows—
Freedom reigns to-day!
Glory, etc.

John Brown's soul through the world is marching on;
Hail to the hour when oppression shall be gone!
All men will sing, in the better age's dawn,
Freedom reigns to-day!
Glory, etc.

John Brown dwells where the battle-strife is o'er;
Hate cannot harm him nor sorrow stir him more;
Earth will remember the crown of thorns he wore—
Freedom reigns to-day!
Glory, etc.

John Brown's body lies mouldering in the grave;
John Brown lives in the triumphs of the brave;
John Brown's soul not a higher joy can crave—
Freedom reigns to-day!
Glory, glory hallelujah!
Glory, glory hallelujah!
Glory, glory hallelujah!
Freedom reigns to-day!

EDNA DEAN PROCTOR.

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### Three Hundred Thousand More.

WE are coming, Father Abra'am, three hundred thousand more,
From Mississippi's winding stream and from New England's shore;
We leave our plows and workshops, our wives and children dear,
With hearts too full for utterance, with but a silent tear;
We dare not look behind us, but steadfastly before,—
We are coming, Father Abra'am,—three hundred thousand more!

If you look across the hill-tops that meet the Northern sky,
Long moving lines of rising dust your vision may descry;
And now the wind an instant tears the cloudy veil aside,
And floats aloft our spangled flag in glory and in pride;
And bayonets in the sunlight gleam, and bands brave music pour,—
We are coming, Father Abra'am,—three hundred thousand more!

If you look all up our valleys, where the growing harvests shine,
You may see our sturdy farmer-boys fast forming into line;
And children from their mother's knees are pulling at the weeds,
And learning how to reap and sow, against their country's needs;
And a farewell group stands weeping at every cottage-door;
We are coming, Father Abra'am,—three hundred thousand more!

You have called us, and we're coming, by Richmond's bloody tide,
To lay us down, for freedom's sake, our brothers' bones beside;
Or from foul treason's savage grasp to wrench the murderous blade,
And in the face of foreign foes its fragments to parade.
Six hundred thousand loyal men and true have gone before,—
We are coming, Father Abra'am,—three hundred thousand more!

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### The Gallant Fighting "Joe."

FROM Yorktown on the fourth of May[1]
The rebels did skedaddle,
And to pursue them on their way
Brave Hooker took his saddle.
"I'll lead you on, brave boys," he said,
"Where danger points the way;"
And drawing forth his shining blade,
"Move onward!" he did say.

*Chorus.*

Then we'll shout hurrah for Hooker, boys,
The gallant fighting Joe;
We'll follow him with heart and hand
Wherever he does go.

[1] 1862.

"Forward, march!" then was the word
That passed from front to rear,
When all the men with one accord
Gave a loud and hearty cheer.
And then with Hooker at our head
We marched in order good,
Till darkness all around us spread,
When we lay down in the wood.

Early next morn by break of day
The rain in torrents fell;
"This day," brave Hooker he did say,
"Your valor it will tell.
Williamsburg is very near,
Be steady every man,
Let every heart be filled with cheer,
And I will take the van."

The gallant Massachusetts men
Fought well and nobly, too,
As did the boys from good old Penn.,
And Jersey, ever true,
And Sickles' men like lions brave
Their courage did display,
For gallantly they did behave
On the battle-field that day.

The men from Mass. and good old Penn.
That morn the fight began,
And like true, noble-hearted men,
Most nobly they did stand.
When Jersey's sons, the bold, the brave,
Not fearing lead or steel,
Their gallant comrades for to save,
Dashed boldly to the field.

By every means the rebels sought
To stand the Jersey's fire,
But soon for them it was too hot,
And they quickly did retire.
But getting reinforced again
With numbers very great,
The gallant band of Jerseymen
Were forced for to retreat.

"Now, Sickles' men," Hooker did say,
"Move out to the advance;
If you your courage would display,
Now you have got a chance.
The foe have forced us to give way,
They number six to one,
But still, my lads, we'll gain the day,
And I will lead you on."

Excelsior then the foremost stood,
Not knowing dread or fear,
And met the rebels in the woods
With a loud and hearty cheer.
Volley after volley flew,
Like hail the balls did fly,
And Hooker cried, "My heroes true,
We'll conquer or we'll die."

Our ammunition being gone,
Brave Hooker then did say,
"Re-enforcements fast are coming on,
My lads, do not give way.
Keep good your ground, our only chance
Is t' remain upon the field,
And if the rebels dare advance,
We'll meet them with the steel."

'Twas then brave Kearny did appear,
Who ne'er to foe would yield;
To him we gave a hearty cheer
As he rushed on the field.
"Now charge! my lads," then Hooker cried,
"Our work will soon be done,
For with brave Kearny by our side
The rebels we'll make run."

And since that time we all do know
The battles he hath won;
He beat the rebels at Bristow,
And chased them to Bull Run;
And had we a few more loyal men
Like the gallant fighting "Joe,"
The war would soon be at an end,
Then home we all would go.

Singing, hurrah, hurrah, for Hooker's boys,
The gallant Fighting Joe,
We'll follow him with heart and hand
Wherever he does go.

JAMES STEVENSON.

---

### The Little Zouave.

[One little stocky fellow in the Fire regiment killed thirteen men in thirteen shots. He was afterwards killed himself.]

'TWAS a little Zouave, of the fireman sort,
His face powder-blackened, his hair shingled short,
His brawny chest naked, his eyes flashing flame,
As over the red field of battle he came;

Then c-r-r-rack! went his gun,
On the banks of Bull Run,
And the great rebel army was lessened by one.

The batteries thundered, the cannon-balls flew,
The smoke and the dust hid the soldiers from view;
But whenever the cloud lifted up, you might scan
The little Zouave taking aim at his man.
Then c-r-r-rack! went his gun,
On the banks of Bull Run,
And put a quietus to some rebel's fun.

The day was a scorcher, the men were athirst,
And the little Zouave often fluently cursed;
But still he pressed on among shrapnel and shell,
And each time he fired an enemy fell;
For c-r-r-rack! went his gun,
On the banks of Bull Run,
And every shot told, on the dead list, for one.

The rebels, astonished, remarked now and then,
"Them red-legged devils fight wuss'n our men,"
For they saw that no rebel and traitor could have
One quarter the pluck of the little Zouave;
So c-r-r-rack! went his gun,
On the banks of Bull Run,
Making holes in the rascals, to let in the sun.

Still forward, bare-breasted, and sp'iling for fight,
The little Zouave battled well for the right;
Perhaps it was lucky he never could know
How our army received a repulse from the foe.
For c-r-r-rack! went his gun,
On the banks of Bull Run—
A Minie-ball came, and the Zouave was done!

There, prone on the field of his prowess he lay,
In the last fading light of the lingering day;
The wound in his forehead was ghastly to see,
But the little Zouave had done gloriously!
And his merciless gun,
On the shores of Bull Run,
Had settled the hash of a dozen and one!

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MISS CHERRY-BLOSSOM OF TÔKYÔ. By John Luther Long. This is a most timely novel, dealing as it does with the home-life of a country now proving its prowess on foreign shores. The heroine, a daughter of a Japanese noble, having been educated for several years in America, returns to her native land only to fall in love with the young secretary of the American embassy; who, though at first merely amusing himself, afterwards reciprocates in the most approved fashion. The race prejudice against the "barbarian" is depicted with great force, while the home-life and culture of the land of the Cherry-Blossom is charmingly described. Mr. Long has succeeded in writing an extremely powerful novel, without violating the moral code, so eagerly attacked by *new woman* authors of the present day.

# *MILITARY ORDER OF THE LOYAL LEGION OF THE UNITED STATES.*

*Companions of the Loyal Legion are invited to contribute to this department. News of the Commanderies is always welcome, but suggestions likely to inure to the benefit of the whole organization are of higher value, and therefore particularly desired. The pages of the Loyal Legion Department of the "United Service" are always at the service of members of the Order desiring to discuss matters of general interest to their comrades of the Military Order of the Loyal Legion.*

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**Maine Commandery.**

Stated meeting held March 6, 1895.

To THE FIRST CLASS.—Lieutenant James A. Dole, U.S.V.; Captain Frank A. Garnsey, U.S.V.; Lieutenant Henry E. Sellers, U.S.V.; Lieutenant-Colonel Joseph Hutchins, U.S.V.

**California Commandery.**

Stated meeting held March 16, 1895.

To THE FIRST CLASS.—Lieutenant Mark T. Berry, U.S.V.

To THE SECOND CLASS.—John M. Bailhache, Graham Coghlan, Ralph T. Morgan, Rudolph D. Ransom, Henry A. S. Read.

**Iowa Commandery.**

Stated meeting held March 12, 1895.

To THE FIRST CLASS.—Captain Henry Moreland, U.S.V.

To THE FIRST CLASS (by inheritance).—Walter Hamilton Dewey.

**Illinois Commandery.**

Stated meeting held February 14, 1895.

To THE FIRST CLASS.—Lieutenant Michael W. Phalen.

To THE FIRST CLASS (by inheritance).—Walter C. Gunn.

**District of Columbia Commandery.**

Stated meeting held March 7, 1895.

To THE FIRST CLASS.—Captain Hillman A. Hall, U.S.V.; Captain Bernard T. Janney, U.S.V.; Major Charles F. Larrabee, U.S.V.; Lieutenant Benj. B. Owens, U.S.V.

**Michigan Commandery.**

Stated meeting held March 7, 1895.

To THE FIRST CLASS.—Master Henry Reaney, U.S.N.; Assistant-Surgeon Arend Van Der Veen, U.S.A.

To THE FIRST CLASS (by inheritance).—Henry Starks Seage.

**Missouri Commandery.**

Stated meeting held March 2, 1895.

To THE FIRST CLASS.—Lieutenant Charles Seibert, U.S.V.; Captain Ansel B. Denton, U.S.V.

**Vermont Commandery.**

Stated meeting held March 12, 1895.

To THE SECOND CLASS.—Mr. Wells Valentine.

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## TRANSFERS.

**Maine Commandery.**

Colonel George K. Brady, U.S.A., to Illinois Commandery; Commander Zera L. Tanner, U.S.N., to District of Columbia Commandery; Captain Colon Angur, U.S.A., to Kansas Commandery.

**Ohio Commandery.**

Colonel Peter T. Swaine, U.S.A., to Maine Commandery.

**Nebraska Commandery.**

Lieutenant Chauncey W. Hyatt, U.S.V., to Maine Commandery.

**District of Columbia Commandery.**

Major Will A. Coulter, U.S.V., to Maine Commandery.

## NECROLOGY.

Major Lionel J. Smith, U.S.V.

THE following is promulgated for the information of the Order:

CHANGES IN MEMBERSHIP, QUARTER ENDING JANUARY 31, 1895.

| COMMANDERY OF | GAIN. | | | LOSS. | | | NET GAIN. | | | NET LOSS. | | | MEMBERSHIP, January 31, 1895. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | First Class. | Second Class. | Third Class. | First Class. | Second Class. | Third Class. | First Class. | Second Class. | Third Class. | First Class. | Second Class. | Third Class. | First Class. | Second Class. | Third Class. | Total. |
| Pennsylvania | 3 | 1 | | 12 | 2 | | | | | 9 | 1 | | 1033 | 114 | 4 | 1151 |
| New York | 31 | 4 | | 6 | | | 25 | 4 | | | | | 1105 | 72 | 4 | 1181 |
| Maine | 7 | | | 1 | 1 | | 6 | | | | 1 | | 153 | 6 | | 159 |
| Massachusetts | 23 | 1 | | 15 | 1 | | 8 | | | | | | 819 | 53 | 13 | 885 |
| California | 26 | 23 | | 10 | 1 | | 16 | 22 | | | | | 582 | 71 | 10 | 663 |
| Wisconsin | 3 | 1 | | 2 | | | 1 | 1 | | | | | 207 | 7 | 2 | 216 |
| Illinois | 18 | 4 | | 8 | | | 10 | 4 | | | | | 504 | 63 | 5 | 572 |
| District of Columbia | 29 | 5 | | 13 | 3 | | 16 | 2 | | | | | 641 | 38 | 1 | 680 |
| Ohio | 10 | 1 | | 16 | 2 | | | | | 6 | 1 | | 840 | 61 | 4 | 905 |
| Michigan | 2 | | | 2 | | | | | | | | | 260 | 12 | 2 | 274 |
| Minnesota | 3 | 1 | | 5 | | | | 1 | | 2 | | | 283 | 25 | 3 | 311 |
| Oregon | | | | 2 | | | | | | 2 | | | 69 | 9 | | 78 |
| Missouri | 6 | 2 | | 3 | | | 3 | 2 | | | | | 283 | 21 | 5 | 309 |
| Nebraska | 5 | | | 7 | | | | | | 2 | | | 136 | 17 | 3 | 156 |
| Kansas | 5 | 2 | | 2 | 1 | | 3 | 1 | | | | | 239 | 26 | 3 | 268 |
| Iowa | 10 | | | 3 | | | 7 | | | | | | 162 | 10 | 3 | 175 |
| Colorado | 3 | 2 | | 1 | 1 | | 2 | 1 | | | | | 192 | 19 | | 211 |
| Indiana | 10 | | | 2 | | | 8 | | | | | | 225 | 14 | 1 | 240 |
| Washington | | 1 | | | | | | 1 | | | | | 49 | 12 | | 61 |
| Vermont | 7 | 2 | | | 1 | | 7 | 1 | | | | | 97 | 14 | | 111 |
| Totals | 201 | 50 | | 110 | 13 | | 112 | 40 | | 21 | 3 | | 7879 | 664 | 63 | 8606 |

NET GAIN.

| | |
|---|---|
| First Class | 91 |
| Second Class | 37 |
| Total net gain | 128 |
| Total October 31, 1894 | 8478 |
| Total January 31, 1895 | 8606 |

By command of LUCIUS FAIRCHILD, Brigadier-General U.S.V.,
*Commander-in-Chief.*

JOHN P. NICHOLSON, Brevet Lieutenant-Colonel U.S.V.,
*Recorder-in-Chief.*